



BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Set A

Course Code: SHP1101

Time: 2 Hours

Course Name: Anatomy Physiology & Professional Behaviour

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. The blood contains:

- | | |
|-----------------|-----------------|
| a) 90% of water | b) 80% of water |
| c) 95% of water | d) 60% of water |

Q.2. The natural pacemaker of the heart is:

- | | |
|-------------------|------------------|
| a) AV node | b) SA node |
| c) Purkinje fibre | d) Bundle of his |

Q.3. The thyroxin hormone is secreted by:

- | | |
|--------------------|------------------|
| a) Pituitary gland | b) Adrenal gland |
| c) Thyroid gland | d) Thymus |

Q.4. Reservoir of urine known as:

- | | |
|------------|--------------------|
| a) Bladder | b) Spleen |
| c) Liver | d) Large intestine |

Q.5. "Gonads" means:

- | | |
|-------------------|-----------------------|
| a) Salivary gland | b) Sebaceous gland |
| c) Sweat gland | d) Testis and ovaries |

Q.6. The middle layer or meninges is:

- | | |
|-------------------|-------------------|
| a) Dura mater | b) Pia mater |
| c) Archnoid mater | d) Choroid plexus |

Q.7. Respiratory Centre is situated at which part of brain?

- | | |
|---------------|-------------|
| a) Medulla | b) Pons |
| c) Cerebellum | d) Thalamus |

Q.8. The volume of CO₂ in percentage in expired air is:

- | | |
|---------|--------|
| a) 16% | b) 4% |
| c) 0.4% | d) 21% |

Q.9. The gastric juice is produced by:

- | | |
|------------|--------------|
| a) Liver | b) Pancreas |
| c) Stomach | d) Intestine |



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Q.10. A structure composed of two or more tissues is termed:

- a) Organ
- b) Serous membrane
- c) Complex tissue
- d) Organ system

Section – B

04X04 = 16 Marks

Q.1. Difference between the negative and positive feedback of homeostasis mechanism.

Q.2. Describe the composition of blood.

Q.3. Draw the flow chart of blood circulation in human body.

Q.4. How to sound wave and auditory process in human body?

Section – C

04X06 = 24 Marks

Q.1. Define Tissue. Explain the epithelium tissue with the help of a diagram.

Q.2. Explain the stomach structure and function with the help of a diagram.

Q.3. Define nephron. Explain the bladder and urethra.

Q.4. Describe the internal male sex organs.

जि.स. अम्बिका



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Section – B

04X04 = 16 Marks

Q.1. Difference between the negative and positive feedback of homeostasis mechanism.

Negative feedback mechanisms

In systems controlled by negative feedback, the effector response decreases or negates the effect of the original stimulus, maintaining or restoring homeostasis (thus the term negative feedback). Control of body temperature. Body temperature is a physiological variable controlled by negative feedback, which prevents problems due to it becoming too high or too low. When body temperature falls below the preset level, this is detected by specialized temperature sensitive nerve endings in the hypothalamus of the brain, which form the control Centre. This Centre then activates mechanisms that raise body temperature (effectors). These include:

- stimulation of skeletal muscles causing shivering
- narrowing of the blood vessels in the skin reducing the blood flow to, and heat loss from, the peripheries
- behavioural changes, e.g. we put on more clothes or curl up.

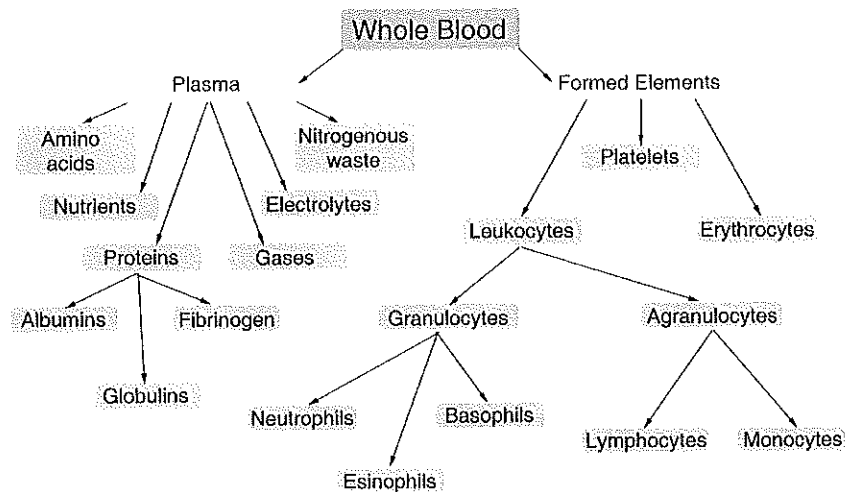
Positive feedback mechanisms

In positive feedback mechanisms, the stimulus progressively increases the response, so that as long as the stimulus is continued the response is progressively amplified. Examples include blood clotting and uterine contractions during labour.

Q.2. Describe the composition of blood.

The normal volume of blood in an adult is about 4.5-6 litres (approx. 7-8% of bodyweight). Blood is made up of two components blood cells and blood plasma.

Erythrocytes (Red blood cells, Ec)	Transport oxygen and carbon dioxide. Represent the largest volume percentage of blood cells.
Leucocytes (White blood cells, Ls)	Defend against pathogens and other foreign substances. This group is made up of these cell type: granulocytes, lymphocytes and monocytes
Thrombocytes (Blood platelets, Tc)	Involved in blood clotting



Q.3. Draw the flow chart of blood circulation in human body.

Blood Circulation

Blood circulation comprises two parts:

Pulmonary circulation

- The left ventricle
- The aorta
- The arteries/arterioles
- The veins
- The inferior vena cava and superior vena cava
- The right atrium

Systemic circulation

- The right ventricle
- The pulmonary arteries
- The network of capillaries in the lung
- The pulmonary veins
- The left atrium

Q.4. How to sound wave and auditory process in human body?

Sound waves and the auditory process

The outer ear picks up sound by means of perception of sound waves (pressure fluctuation in the air). Sound are regular sound waves with a particular frequency (number of vibration per tome unit). The sound higher as the frequency increase.

- The unit Hertz (Hz; number of vibration per sound) is used to indicate the pitch of a sound.
- The volume of a sound depends on the size of the vibration and is measured in decibel (Db).
- The interception sound waves are transmitted along the auditory canal to the ear drum and make in vibrate.
- The vibration of the ear drum are transmitted to the oval window by the auditory ossicles (malleus, incus and stapes).



- This causes the fluid (lymph) in the cochlea to start vibrating.
- This is registered by the sense cells in the cochlea.
- The corresponding electrical signals are then transmitted by nerve fibres to the auditory centre in the cerebrum where they are perceived as sounds.

Structure of the cochlea

The bony cochlea is a spiral-shaped tunnel in the bone. The cochlea has three fluid filled ducts. The sense cells are located in the cochlear duct.

Hearing range

- Hearing range of a healthy adolescent: 20 Hz-21,000Hz
- The upper threshold of the hearing range decreases with age
- 35-year-old: 15,000 Hz
- 50 years old: 12,000Hz
- In old age: 5,000Hz

Section – C

04X06 = 24 Marks

Q.1. Define Tissue. Explain the epithelium tissue with the help of a diagram.

Group of the cells is known as tissue. The tissues of the body consist of large numbers of cells and they are classified according to the size, shape and functions of these cells. There are four main types of tissue that each have subdivisions:

1. Epithelial tissue or epithelium.
2. Connective tissue.
3. Muscle tissue.
4. Nervous tissue.

Epithelial tissue or epithelium.

Epithelial tissue or epithelium – This group of tissues is found covering the body and lining cavities, hollow organs and tubes.

Function

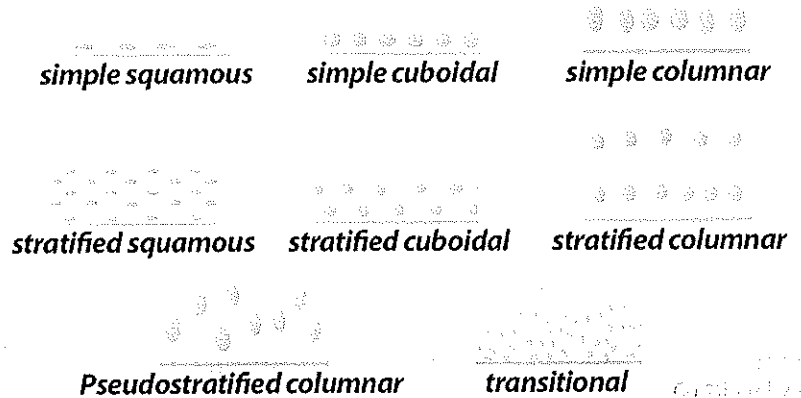
- Protection of underlying structures from, for example, dehydration.
- Secretion
- Absorption

Types of epithelial tissue

Simple epithelial tissue

- A single layer of cells. and simple epithelial tissue divided are.

epithelial tissues



Squamous epithelium

- ✦ This is composed of a single layer of flattened cells, forming a thin and very smooth membrane.

Cuboidal epithelium

- ✦ This consist of cube – shaped cells fitting closely together lying on a membrane.

Columnar epithelium

- ✦ This is formed by a single layer of cells, rectangular in shape on basement membrane.

Stratified epithelial

stratified epithelial consist of several layers of cells of various shaped. Basement membranes are usually absent. The main function of stratified epithelium is to protect underlying structures from mechanical wear and tear. There are two main types:

Stratified squamous epithelial

- ✦ This is composed of a number of layers of cells. In the deepest layers the cells are mainly columnar and, as they grow towards the surface.

Transitional epithelial

- ✦ This is composed of several layers of pear-shaped cells. It is found lining the urinary bladder and allows for stretching as the bladder fills.

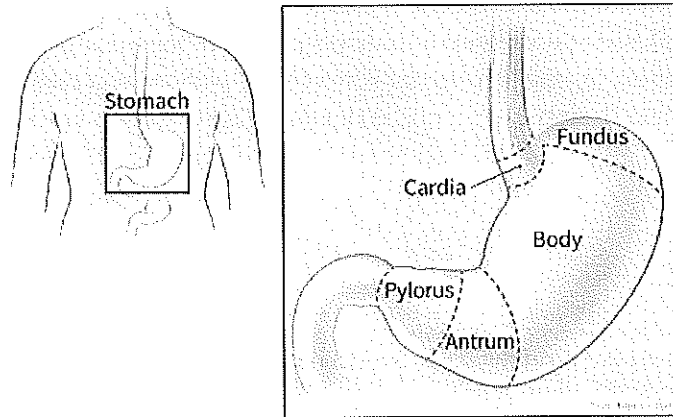
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Stomach

The stomach is a J-shaped dilated portion of the alimentary tract situated in the epigastric, umbilical and left hypochondriac regions (central and left part of the upper abdomen) of the abdominal cavity. It stores and processes food before releasing it into the intestine in stages. On the inside of the stomach is the gastric mucous membrane with the gastric glands. The stomach has a capacity of around 1.5 liters. The gastric glands produce gastric juice, which contains gastric acid (hydrochloric acid) and pepsin.

Gastric juice

About 2 liters of gastric juice are secreted daily by specialised secretory glands in the mucosa. The gastric acid makes the food more liquid, disinfects the contents and macerates the proteins. Pepsin is an enzyme for the digestion of protein.



Function of the stomach

Sensory perception even before we start eating and by the filling of the stomach. Temporary storage allowing time for the digestive enzymes, pepsins, to act. Limited absorption of water, alcohol and some lipid-soluble drugs. Regulation of the passage of gastric contents into the duodenum. When the chyme is sufficiently acidified and liquefied, the pylorus forces small jets of gastric contents through the pyloric sphincter into the duodenum. The sphincter is normally closed, preventing backflow of chyme into the stomach. Secretion of the hormone gastrin (see above).

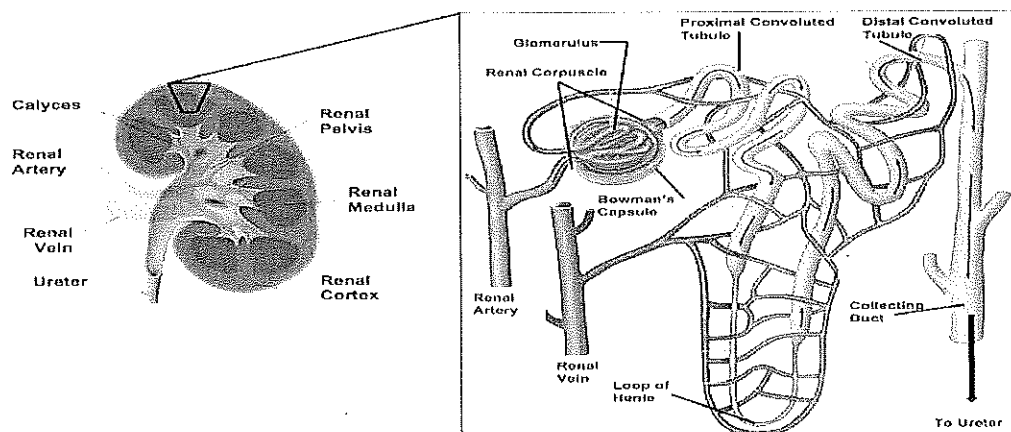
Q.3. Define nephron. Explain the bladder and urethra.

Nephron

There are approximately 1million nephrons in each kidney. Each nephron has two sections:

- The renal corpuscle
- The renal tubule

Around 1500 liters of blood flow through the kidney each day. This is roughly 300 times the total amount of blood found in the human body. Approximately 170 liters of primary urine are produced from the blood by the renal corpuscles each day. This leaves around 1.5liters of final urine which excreted.





Bladder

The bladder is a muscular bladder (smooth muscle) lined with a mucous membrane. The bladder is internal sphincter is not under voluntary control. In contrast the external sphincter is an integral part of the pelvic floor muscles and is under voluntary control. It has capacity of 500-800ml. The urge to urinate occurs when there is a urine volume of approximately 200 ml and the urge becomes strong at approximately 400 ml.

Urethra

On the inside of the urethra, there is a mucous membrane with longitudinal folds. The male urethra is 20-25 cm long and transports both urine and semen. It has two bends and a number of narrow section which must be taken into account when inserting catheter. The female urethra is much shorter, measuring just 3 to 5 cm.

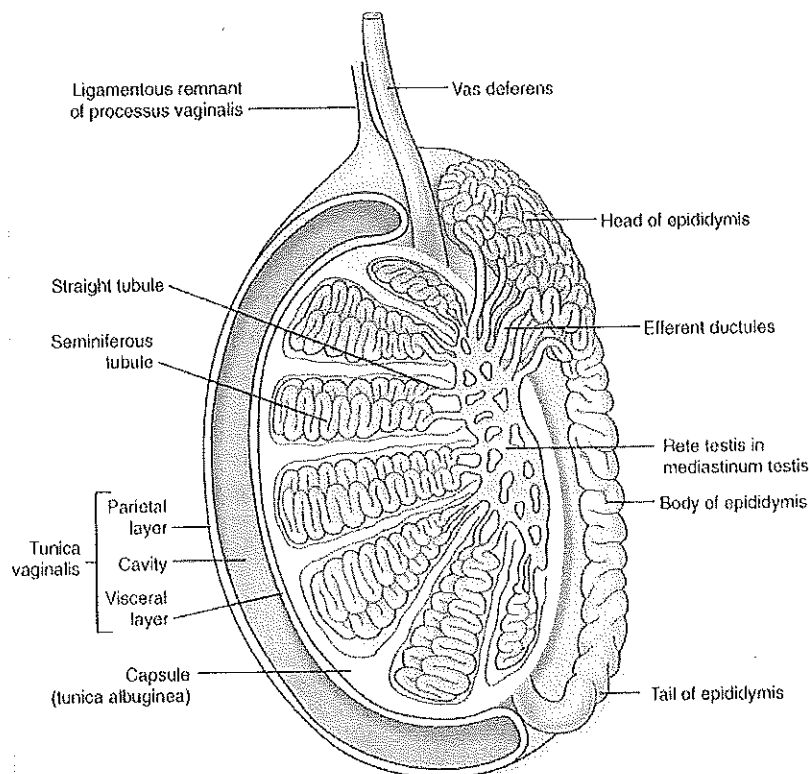
Q.4. Describe the internal male sex organs.

Testes

The two testes which measure approximately 4-5 cm in length, are enclosed in the scrotum which hangs outside the body cavity.

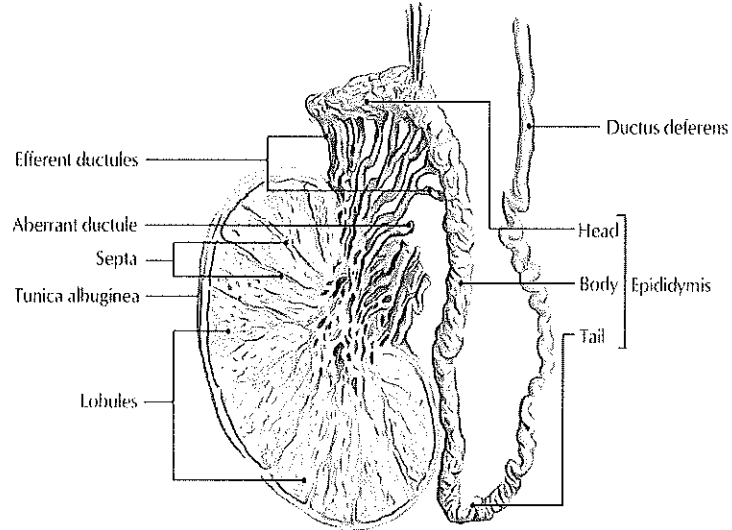
Function

The testes is therefore to produce sperm and the hormone testosterone.



Epididymis

The two epididymis cover the posterior side of the testicles like a cap. Each epididymis contains 10-20 efferent ducts and the long, tightly coiled tubule of the epididymis (around 5m in length). It around 10 days for sperm to travel through the tubule of the epididymis. Sperm mature fully during time due to secretion.



Vas deferens

The vas deferens is a muscular tube which is approximately 50cm long.

It's correct



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Section – A

10X01 = 10 Marks

Q.1. The average Hb content of human blood is:

- a) 18 – 23 gm/dl
- b) 14 – 16 gm/dl
- c) 8 – 10 gm/dl
- d) 16 – 20 gm/dl

Q.2. The only artery which supplies deoxygenated blood?

- a) Pulmonary artery
- b) Hepatic artery
- c) Gastric artery
- d) Renal artery

Q.3. Oxytocin is a hormone produced by:

- a) Anterior pituitary gland
- b) Posterior pituitary gland
- c) Placenta
- d) Adrenal gland

Q.4. Excretory unit of kidney is:

- a) Bowman's capsule
- b) Glomerulus
- c) Nephron
- d) Henle's loop

Q.5. Pigment which gives color to skin & hairs is:

- a) Collagen
- b) Keratin
- c) Melanin
- d) Prolactin

Q.6. The primary visual area is situated in the:

- a) Temporal lobe
- b) Occipital lobe
- c) Frontal lobe
- d) Parietal lobe

Q.7. The organ which is located in the pleural cavity of the thorax is:

- a) Liver
- b) Heart
- c) Lungs
- d) Kidney

Q.8. The salivary gland secretes saliva which contains the enzyme:

- a) Pepsin
- b) Renin
- c) Ptyalin
- d) Lipase

Q.9. What is the correct equation of vertebral column?

- a) C₇ T₁₂ L₅ S₅ C₄
- b) C₇ T₁₂ L₅ S₅ C₄
- c) C₉ T₁₀ L₃ S₁ C₁
- d) None



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Q.10. Central nervous system is consists of:

- a) Brain
- b) Spinal cord
- c) Brain and spinal cord
- d) Spinal only

Section – B

04X04 = 16 Marks

- Q.1. Difference between the diffusion and osmosis.
- Q.2. What do you mean thyroid and parathyroid hormone?
- Q.3. Explain the CSF with function.
- Q.4. Describe the cardiac valves of the heart.

Section – C

04X06 = 24 Marks

- Q.1. Define cell. Explain the cell organelles with the help of a diagram.
- Q.2. Define trachea. Explain the trachea structure and function with the help of a diagram.
- Q.3. What do you mean epidermis? Explain the cutaneous glands.
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Section – B

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Q.1. Difference between the diffusion and osmosis.

Diffusion

Diffusion refers to the movement of a chemical substance from an area of high concentration to an area of low concentration. Diffusion can also occur across a semipermeable membrane, such as the plasma membrane or the capillary wall.

Osmosis

A process by which molecules of a solvent tend to pass through a semipermeable membrane from a less concentrated solution into a more concentrated one.

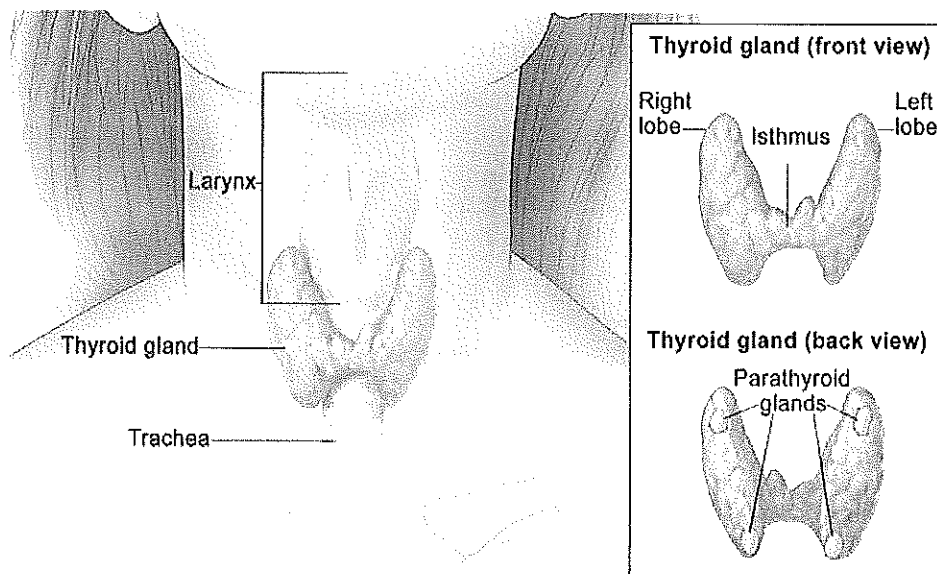
Q.2. What do you mean thyroid and parathyroid hormone?

Thyroid gland

The thyroid gland weighs around 25g and lies just below the larynx. With its two lobes, it resembles a butterfly in shape. It is not normally possible to feel the thyroid gland from the outside. The main hormone produced by the thyroid gland is thyroxine (T_4). Thyroxine contains iodine, an adequate supply of iodine is important in terms of thyroid gland function.

Parathyroid gland

The parathyroid glands are four small, lenticular glands, located at all four poles of the thyroid gland. They produce parathyroid hormone. This help to regulate calcium metabolism. Vitamin D also plays a part in regulating calcium metabolism and assumes the function of a hormone.



Thyroid and Parathyroid gland

Q.3. Explain the CSF with function.

Cerebrospinal fluid (CSF)

Cerebrospinal fluid is secreted into each ventricle of the brain by *choroid plexuses*. CSF pressure is higher than venous pressure, CSF is secreted continuously at a rate of about 0.5 ml per minute, i.e. 720 ml per day. The volume remains fairly constant at about 150 ml. CSF pressure may be measured using a vertical tube attached to a *lumbar puncture* needle inserted into the subarachnoid space above or below the 4th lumbar vertebra (which is below the end of the spinal cord).

CSF consisting of:

- Water
- Mineral salts
- Glucose
- Plasma proteins: small amounts of albumin and globulin
- A few leukocytes.

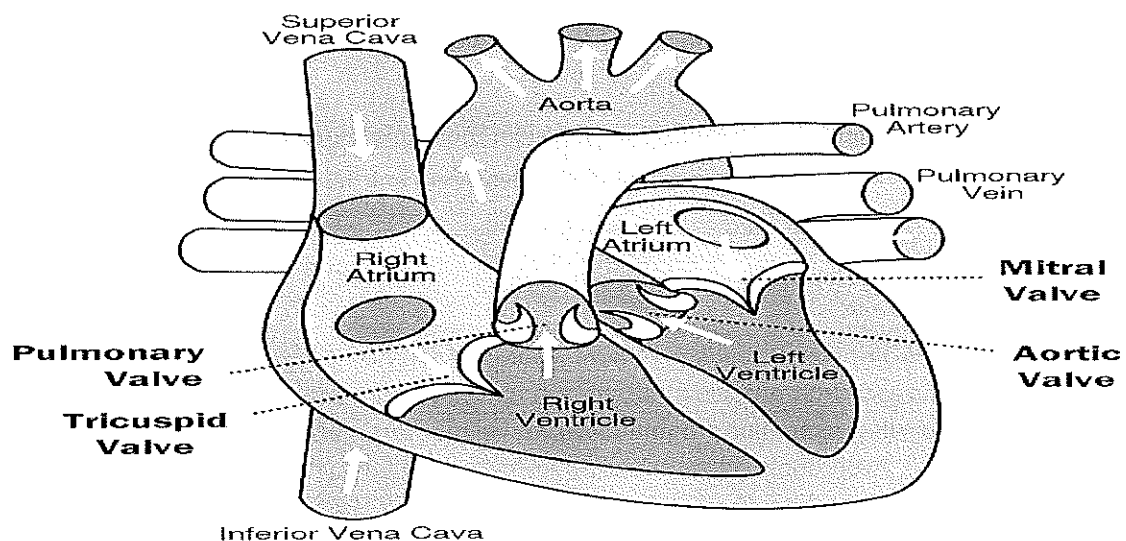
Functions of cerebrospinal fluid

- CSF supports and protects the brain and spinal cord by maintaining a uniform pressure around these vital structures and acting as a cushion or shock absorber between the brain and the skull.
- It keeps the brain and spinal cord moist and there may be exchange of nutrients and waste products between CSF and nerve cells.

Q.4. Describe the cardiac valves of the heart.

Cardiac Valve

The atrioventricular valves are located between the atria and the ventricles (with the tricuspid valve on the right and the mitral valve on the left). Between the ventricles and the large vessels which leave the heart, there are semilunar valves (with the pulmonary valve on the right and the aortic valves on the left). The cardiac valves ensure that the blood flows in one direction only. They work in a similar way to general valves and prevent the blood from flowing backward. When the ventricles contract, the atrioventricular valves are closed and the semilunar valves are open.



Cardiac valves

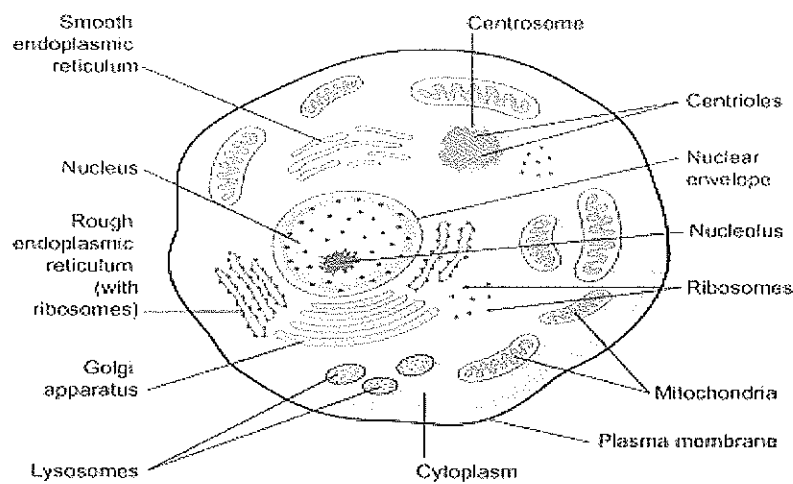


Q.1. Define cell. Explain the cell organelles with the help of a diagram.

Cell:

Cells are the smallest functional units of the body. They are grouped together to form tissues, each of which has a specialised function, e.g. blood, muscle, bone. And Organs are grouped together to form systems.

Cell is structured and functional of the body is known as the cell. The human body develops from a single cell called the zygote, which results from the fusion of the ovum (female egg cell) and the spermatozoon (male sex cell). A cell consists of a plasma membrane inside which are a number of organelles suspended in a watery fluid called cytoplasm.



The cell: structure and functions

Plasma membrane

The plasma membrane consists of two layers of *phospholipids* and sugar molecules embedded in them. In addition to phospholipids, the lipid *cholesterol* is also present in the plasma membrane. The membrane proteins perform several functions:

- Branched carbohydrate molecules attached to the outside of some membrane protein molecules give the cell its immunological identity.
- They can act as specific receptors for hormones and other chemical messengers.
- Some are involved in transport across the membrane.

Organelles

Nucleus

Every cell in the body has a nucleus, with the exception of mature erythrocytes (red blood cells). Skeletal muscle and some other cells contain several nuclei. The nucleus is the largest organelle.

Mitochondria

Mitochondria are membranous, sausage-shaped structures in the cytoplasm, sometimes described as the 'power house' of the cell. They are involved in aerobic respiration, the processes by which chemical energy is made available in the cell.



Ribosomes

These are tiny granules composed of RNA and protein. They synthesise proteins from amino acids, using RNA as the template. Ribosomes are also found on the outer surface of the nuclear envelope and rough endoplasmic reticulum where they manufacture proteins for export from the cell.

Endoplasmic reticulum (ER)

Endoplasmic reticulum is an extensive series of interconnecting membranous canals in the cytoplasm. There are two types:

Smooth ER synthesises lipids and steroid hormones, and is also associated with the detoxification of some drugs. Some of the lipids are used to replace and repair the plasma membrane and membranes of organelles.

Rough ER is studded with ribosomes. These are the site of synthesis of proteins.

Golgi apparatus

The Golgi apparatus consists of stacks of closely folded flattened membranous sacs. It is present in all cells but is larger in those that synthesise and export proteins. The vesicles are stored and, when needed, they move to the plasma membrane and fuse with it. The contents then leave the cell by exocytosis.

Lysosomes

Lysosomes are one type of secretory vesicle with membranous walls, which are formed by the Golgi apparatus. They contain a variety of enzymes involved in breaking down fragments of organelles and large molecules (e.g. RNA, DNA, carbohydrates, proteins). Lysosomes in white blood cells contain enzymes that digest foreign material such as microbes.

Q.2. Define trachea. Explain the trachea structure and function with the help of a diagram.

Trachea

Position

The trachea or windpipe is a continuation of the larynx and extends downwards to about the level of the 5th thoracic vertebra where it divides at the carina into the right and left primary bronchi, one bronchus going to each lung. It is approximately 10 to 11 cm long.

Structure

The trachea is composed of three layers of tissue, and held open by between 16 and 20 incompletes (C-shaped) rings of hyaline cartilage.

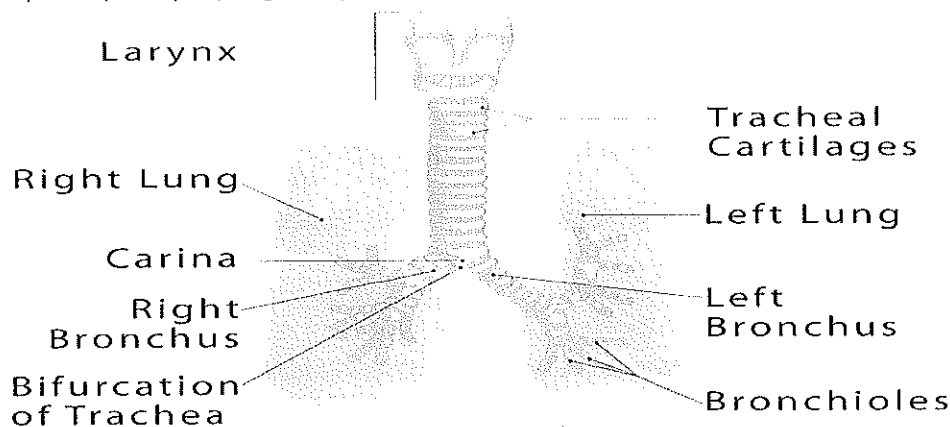


Figure 1: Trachea



Functions

Support and patency

Tracheal cartilages hold the trachea permanently open (patent), but the soft tissue bands in between the cartilages allow flexibility so that the head and neck can move freely without obstructing or kinking the trachea.

Cough reflex

Warming, humidifying and filtering

These continue as in the nose, although air is normally saturated and at body temperature when it reaches the trachea.

Q.3. What do you mean epidermis? Explain the cutaneous glands.

Epidermis

The epidermis is the most superficial layer of the skin and is composed of epithelium tissue. The epidermis itself also has more than one layer. The outer most surface is the corneal layer, underneath is the basal layer, which is also subdivided into a number of parts. Corneal layer varies in thickness, and provides good protection against mechanical and chemical influences. Basal layer is responsible for skin growth. and epidermis also contain other type of cell. The melanocytes produce the skin pigment called melanin. This pigment is responsible for the skin colour and for protecting the skin against radiation from the sun. There is no blood supply to the epidermis. it therefore obtains its nutrients from the dermis.

Cutaneous glands

- **Sebaceous gland**
 - the sebaceous glands are generally attached to hair follicle and open into the hair canal. They produce a fatty secretion.
- **Sweat glands**
 - Sweat glands are tube shaped glands which open into a skin pore. They are found all over the skin. Sweat glands release a thin liquid secretion (A mixture of water, salts, organic acid etc.) sweating help to regulate body temperature and it's also support the skin's protective acid mantle.

Q.4. Describe the internal female sex organs.

Internal genitalia

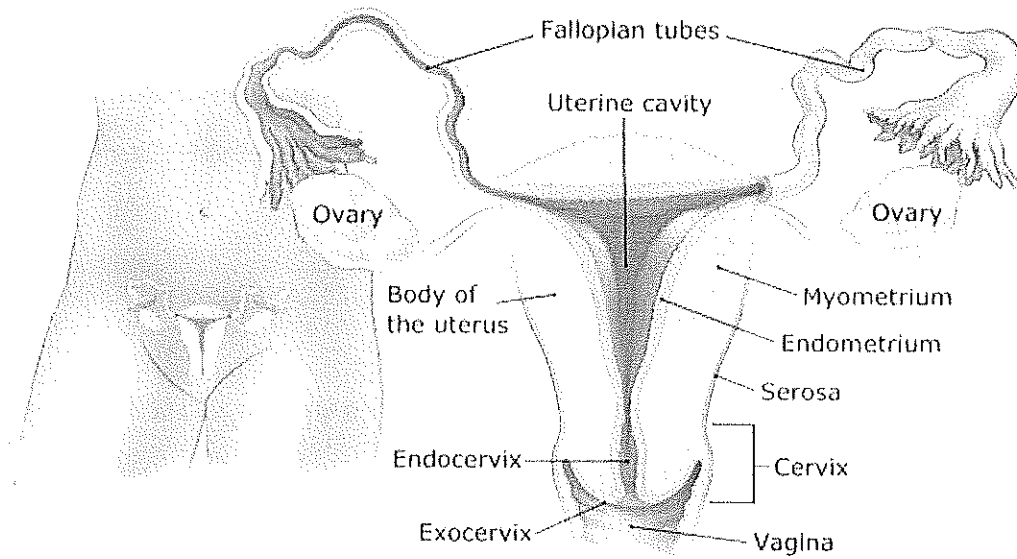
The internal organs of the female reproductive system lie in the pelvic cavity and consist of the vagina, uterus, two uterine tubes and two ovaries.

Vagina

The vagina is a fibromuscular tube lined with stratified squamous epithelium, connecting the external and internal organs of reproduction. It is about 10cm long, but it also has a high degree of elasticity and can therefore stretch. Its mucus membrane has a robust structure for protection against mechanical damage and it has a pH value OF 4-4.5.

Uterus

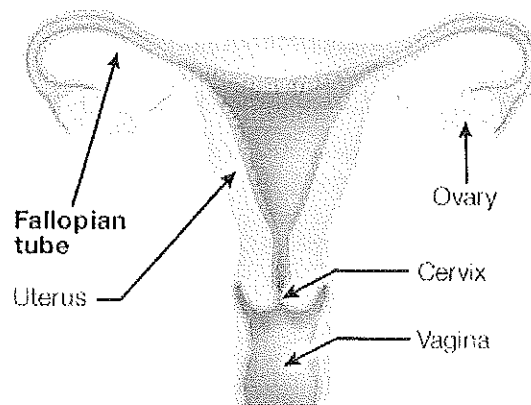
The uterus is pear shaped, 6-7 cm long and weight 50gm. It is situated between the bladder and the rectum and is anchored in the pelvis with strong ligament.



Uterus

Fallopian tube

Each of the two fallopian tubes measure 10-17 cm in length, from the infundibulum at the ovary to the opening in to the uterus. The fallopian tube receives the ovum after ovulation and transport it to the uterus.



Fallopian tube

Ovaries

The ovaries are the female gonads (glands producing sex hormones and the ova). They are 2.5 to 3.5 cm long, 2 cm wide and 1 cm thick. Each is attached to the upper part of the uterus by the ovarian ligament.

Function

The ovaries function are the maturation of ova and the production of the female sex hormones Oestrogen and progesterone.

Ilc amprakal





School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Set - A

Course Code: SHP1102

Time: 2 Hours

Course Name: Hygiene and Safety & Support in Personal Hygiene

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1 What is the minimal time needed for alcohol-based hand rub to kill most germs on your hands?

- | | |
|--------------|--------------|
| a) 20 second | b) 3 second |
| c) 1 minute | d) 10 second |

Q.2. Skin turgor means:

- | | |
|---------------------|------------------|
| a) Swelling of skin | b) Greasy skin |
| c) Tension of skin | d) None of above |

Q.3. Condoms is a method of contraception-

- | | |
|--------------|-------------|
| a) Permanent | b) Chemical |
| c) Natural | d) Physical |

Q.4. When a nurse is performing a surgical hand hygiene. She must keep.

- | | |
|-----------------|-------------------------------|
| a) Below elbows | b) At 45° angle |
| c) Above elbows | d) In a comfortable condition |

Q.5 HIV is transmitted by.

- | | |
|--------------------|-----------------|
| a) Smear infection | b) Blood |
| c) During sex | d) All of above |

Q.6. Asepsis is known as-

- | | |
|--------------------|--------------------|
| a) Germ reduction | b) Free from germs |
| c) Eradicate germs | d) None of above |

Q.7. In the Disinfection method, what is the temperature in to rinsing method of the thermal process?

- | | |
|---------|-----------|
| a) 93°C | b) 93.3°C |
| c) 91°C | d) 90°C |

Q.8 During disinfection which type of filter used in the filtration process.

- | | |
|----------------|----------------|
| a) OCTA filter | b) BETA filter |
| c) HEPA filter | d) HEMA filter |



Q.9. The agent which kills pathogenic bacteria is called:

- | | |
|------------|-----------------|
| a) Asepsis | b) Disinfectant |
| c) Fomite | d) Bacteriostat |

Q.10. Influenza is a-

- | | |
|----------|-------------|
| a) Virus | b) Bacteria |
| c) Fungi | d) Protozoa |

Section – B

04X04 = 16 Marks

- Q.1. Define hygiene. Write down the importance of personnel hygiene.
- Q.2. What do you understand skin turgor? Difference between Physiological and pathological skin turgor?
- Q.3. Write down the four sign of security and insecurity?
- Q.4. Explain the four causes of infection disease.

Section – C

04X06 = 24 Marks

- Q.1. How to disinfect the hands before touching the patient?
- Q.2. Elaborate the personal protective measure which uses by a health care worker.
- Q.3. Define occupational safety. Write down the difference between occupational accidents and disease.
- Q.4. Define BMW. Describe the segregation.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: 1102

Answer key

Time: 2 Hours

Course Name: Hygiene and Safety & Support in Personal Hygiene

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

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- b) Disinfectant
- c) Fomite
- d) Bacteriostat

Q.10. Influenza is a-

- a) Virus
- b) Bacteria
- c) Fungi
- d) Protozoa

Section – B

04X04 = 16 Marks

Q.1. Define hygiene. Write down the importance of personnel hygiene.

Hygiene

The word hygiene comes from Greek and is derived from „Hygeia“, the name for the goddess of good health. It is essentially synonymous with health. Hygiene is the science of keeping people and the environment health and covers the measures used to achieve this. Just over 100 years ago, general refuse and waste water from toilets and bathrooms were still being diverted into rivers and streams. This favoured the spread of epidemics such as cholera and typhoid. These diseases tended to be fatal. Drainage channels were also home to rats and other disease-carrying animals, with rats, for example, carrying the plague. Hygiene levels were so bad that these water courses were often referred to as cloacal in towns and cities. Infant mortality was high and life expectancy much lower than today. In addition to medical advances (eg. the discovery of antibiotics in the 1940s), the improvements in hygiene levels associated with infrastructure measures such as the introduction of sewage pipes in towns and villages and hygiene monitoring for drinking water and food led to sustainable progress in health conditions. Of every 1,000 live births, some 130 infants were still dying around the year 1900 compared with just 3 or 4 today. Life expectancy has also increased over the past century from around 47 years to today's figure of about 80.

Importance of personal hygiene

Personal hygiene is not just about cleaning dirt, sweat and dead skin from the skin and thereby protecting it against disease and environmental influences. The special importance we all place on it cannot be underestimated. We feel better after a refreshing shower or a relaxing bath, and a well-groomed appearance can improve our self-esteem and make us feel more attractive.



Q.2. What do you understand skin turgor? Difference between Physiological and pathological skin turgor?

Skin turgor

The skin has a constant basic tension known as skin turgor (tension of the skin). This tension depends on the fluid content of the skin and may be subject to physiological or pathological changes.

Turgor	Physiological skin tension	Pathological skin tension
Increased	<ul style="list-style-type: none">• During pregnancy or as a result of obesity	<ul style="list-style-type: none">• As a result of swelling, haematoma, local skin tumours• As a result of oedema (generalised)
Reduced	<ul style="list-style-type: none">• Skin folds associated with old age	<ul style="list-style-type: none">• Desiccation as a result, for example, of fever, diarrhoea, malnutrition and vomiting

Q.3. Write down the four sign of security and insecurity?

Signs of security

- patient expresses their desires and aims;
- patient knows their own rights;
- patient feels well informed;
- patient is ready to accept responsibility;
- patient 's speech is appropriate, audible and clear;
- patient has an upright, open posture and stands firmly on both feet;
- patient does not keep making sudden changes of position, but keeps reasonably still (eg. sitting);
- patient has an open gaze, they can look the other person in the eye, their facial expressions are relaxed;
- actions are performed in a calm and relaxed manner.

Signs of insecurity

- patient rarely expresses insecurity directly;
- repeated questions such as: What would you do in my position? '
- patient reacts in an irritated or aggressive manner;
- patient withdraws into their shell and only gives monosyllabic responses;
- patient sticks rigidly to nursing routines;
- speech is quiet, uneven and indistinct,
- posture is closed, i.e, stooped and self-protective;
- patient often looks harassed, wanders about in an agitated manner and keeps changing position;
- their gaze is timid, restless or absent; patient often avoids eye contact with others;
- facial expressions are tense, patient blushes or smiles at inappropriate times;
- actions are performed in a nervous, jittery or agitated manner.



Q.4. Explain the four causes of infection disease.

Causes

Various types of pathogens can cause an infection

Bacteria are fast-multiplying single-cell organisms with a metabolism of their own. They can also survive and multiply outside of a host organism. They adapt well to various environmental conditions.

Basic shapes: cocci, rods, spirals, e.g. Streptococci → pneumonia.

Viruses are tiny pathogens that need a host to multiply. Viruses only possess genetic information(DNA)and a protein shell, e.g. influenza →flu

Fungi are organisms whose metabolic properties offer some very useful applications. A few types of fungi can also cause infections, e.g. Candida albicans → thrush.

Protozoa are parasites with a cell nucleus, e.g. amoebae → amoebiasis.

Worms are animals that live as parasites, e.g. Taenia solium → pork

tapeworm. Insects e.g. Pediculus capitis →head lice.

Section – C

04X06 = 24 Marks

Q.1. How to disinfect the hands before touching the patient?

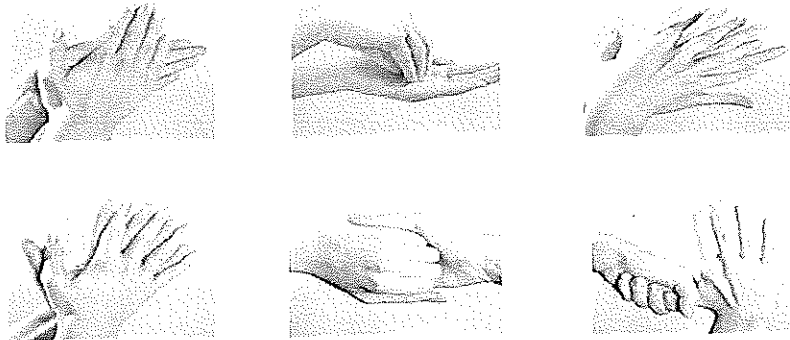
Hand disinfection

When?	<ul style="list-style-type: none"> • Before and after any client contact • Before and after any aseptic treatment • After contact with bodily fluids • After contact with contaminated object, e.g. bed, bedside table • After removing gloves • After sneezing, coughing, wiping nose
How?	<ul style="list-style-type: none"> • Dispense an alcohol-based hand disinfectant into the dry palm of your hand • Rub both hands together well until the skin is dry (for at least 30 seconds)

Please note!

- Do not apply hand disinfectant to wet or dirty hands
- When applying disinfectant, it is not unusual to forget the thumbgs, the fingertips, the area between the fingers or the folds of skin on the palm of the hand
- If applied correctls, the moisturizing agent in the hand disinfectant should take effect and the skin will be protected

Hand disinfection is preferable to hand washing because it is more efficient, gentler, faster and cheaper. Hands do still need to be washed, however.



Q.2. Elaborate the personal protective measure which uses by a health care worker.

Protective measures before contact with bodily fluids

The term bodily fluids/substances covers blood and all its component parts, all bodily secretions and excretions such as sputum, saliva, tears, vaginal secretions, urine, stools or wound secretions. Protective measures include wearing gloves, aprons, masks and protective glasses, as well as proper handling of laundry and equipment and the disposal of bodily fluids.

Gloves

Disposable gloves (nitrile, vinyl) are worn every time contact with bodily fluids/substances or objects and surfaces contaminated with these is certain or possible. Gloves are removed or replaced after any contact/contamination involving bodily fluids/substances and when moving on from one patient to the next. Hands must be disinfected once gloves have been removed. This is because hands may become contaminated during removal of gloves or through micro lesions they may contain.

Aprons

Aprons should be worn if significant contact with bodily fluids/substances is expected (e.g. stools from an incontinent patient, or when treating large, exuding wounds). Aprons will either be disposable, ideally, or can be used again (washable). Wet or dirty aprons are to be disposed of.

Masks

Surgical masks are worn if the mucosa is expected to be exposed to bodily fluids through splashes or droplets, such as when vomiting, coughing or influenza is involved. To avoid infecting patients, personnel with a cold should wear a surgical mask.

Protective glasses

Protective glasses are worn if there is a danger of splashes hitting the eyes, such as when sucking away respiratory secretions or preparing disinfectant solutions.

Laundry

Used bedlinen and patient laundry are disposed of in special plastic bags. Any heavily soiled laundry (e.g. stools, urine, blood) may need to be placed in a special plastic bag.

Devices/instruments

Devices and instruments which may have been contaminated during use must not be reused for other patients unless they are disinfected (eg. rubbing with alcohol or specialist disinfection agent) or possibly sterilised beforehand. This applies to blood pressure cuffs, stethoscopes etc. Disinfection



is performed immediately after use. Interim storage of contaminated items and instruments must be avoided.

Disposal of bodily fluids

Bodily fluids such as stools and urine should be disposed of directly without any interim storage (drum, auto-matic bedpan washer).

Q.3. Define occupational safety. Write down the difference between occupational accidents and disease.

Occupational safety

Safety in the workplace is governed by a series of ordinances and laws. Nobody should be prevented from earning a living as a result of accidents or diseases suffered at work. Apart from any physical and psychological problems these may cause, they can also lead to financial difficulties. Occupational safety refers to the prevention of occupational accidents and diseases and the promotion of both safety in the workplace and the general well-being and satisfaction of employees. Health and productivity are vitally important for both people and the economy. Workplace health promotion is aimed at:

- reducing workplace accidents and thereby avoiding additional costs
- customer and employee satisfaction
- increasing productivity without any detrimental effect on health
- improving quality and ensuring a good corporate image.

Occupational accidents

When physical damage is sustained during the performance of one's occupation, this is referred to as an occupational or workplace accident. Common occupational accidents include:

- cuts and puncture injuries suffered by health care personnel
- back and/or skeletal damage sustained, for example, by nursing personnel or construction workers
- falls
- amputation injuries (e.g. carpenters).

Occupational diseases

Occupational diseases are caused by harmful influences (e.g. chemical, physical) in the work place. It is often Basis of chronic disease processes with the potential to render someone partially or totally incapable of work- ing.

Occupational diseases are frequently caused by

chemical influences

Examples: diseases caused by poisoning from heavy metals like mercury, Lead and cadmium; by solvents such as paints, varnishes and cleaning agents or gases like carbon monoxide

physical influences

Examples: excessive strain on individual joints such as damage to discs in the spinal column, joint disease; hearing problems caused by noise; eye disease caused by light radiation



communicable diseases

Examples: from humans to humans or animals to humans; infections because of working in a laboratory or a health care setting; tropical diseases, hepatitis

negative effects associated with dust

Examples: bronchial carcinoma, allergic reactions, chronic obstructive pulmonary disease, pneumoconiosis mainly triggered by contact with asbestos, silica, flour e.g. construction workers, bakers

skin diseases

Examples: allergic reactions caused by contact with various substances, e.g. contact eczema caused by disinfectant agents or latex gloves

psychological influences

Examples: stress, excessive strain, frequent night work.

Q.4. Define BMW. Describe the segregation.

Bio-medical waste and segregation

All human activities produce waste. We all know that such waste may be dangerous and needs safe disposal. Industrial waste, sewage and agricultural waste pollute water, soil and air. It can also be dangerous to human beings and environment. Similarly, hospitals and other health care facilities generate lots of waste which can transmit infections, particularly HIV, Hepatitis B & C and Tetanus, to the people who handle it or come in contact with it. India generates around three million tonnes of medical wastes every year and the amount is expected to grow at eight per cent annually.

Types of Bio-medical waste

Bio-medical waste means "any solid and/or liquid waste including its container and any intermediate product, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps. Biomedical waste poses hazard due to two principal reasons – the first is infectivity and other toxicity.

Bio Medical waste consists of

- Human anatomical waste like tissues, organs and body parts
- Animal wastes generated during research from veterinary hospitals
- Microbiology and biotechnology wastes
- Waste sharps like hypodermic needles, syringes, scalpels and broken glass
- Discarded medicines and cytotoxic drugs
- Soiled waste such as dressing, bandages, plaster casts, material contaminated with blood, tubes and catheters
- Liquid waste from any of the infected areas
- Incineration ash and other chemical wastes

Segregation

Segregation refers to the basic separation of different categories of waste generated at source and thereby reducing the risks as well as cost of handling and disposal. Segregation is the most crucial step in bio-medical waste management. Effective segregation alone can ensure effective bio-medical waste management.

How does segregation help?

- Segregation reduces the amount of waste needs special handling and treatment
- Effective segregation process prevents the mixture of medical waste like sharps with the general municipal waste.
- Prevents illegally reuse of certain components of medical waste like used syringes, needles and other plastics.
- Provides an opportunity for recycling certain components of medical waste like plastics after proper and thorough disinfection.
- Recycled plastic material can be used for non-food grade applications.
- Of the general waste, the biodegradable waste can be composted within the hospital premises and can be used for gardening purposes.
- Recycling is a good environmental practice, which can also double as a revenue generating activity.
- Reduces the cost of treatment and disposal (80 per cent of a hospital's waste is general waste, which does not require special treatment, provided it is not contaminated with other infectious waste).

J/c
on 12/4/2014



BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

^{SHP}
Course Code: 1102

Sed-B

Time: 2 Hours

Course Name: Hygiene and Safety & Support in Personal Hygiene Max. Marks: 50

Instruction:

1. SECTION-A: Answer all questions from section A. Each question carries 01 mark
2. SECTION-B: Answer all questions from section B. Each question carries 04 marks
3. SECTION-C: Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Which one is not included in prevention of HAI?

- | | |
|---------------------------------|---------------------------------------------|
| a) Hand hygiene | b) Proper aseptic techniques |
| c) Antibiotics for all patients | d) Proper segregation and disposal of waste |

Q.2. Healthy skin generally has a smooth surface. However, infections, skin disease and other diseases may also cause changes in the skin such as:

- | | |
|------------|----------|
| a) Blister | b) Color |
| c) Smell | d) Age |

Q.3. Nosocomial infection means, which occurs from:

- | | |
|--------------|-------------|
| a) Community | b) Hospital |
| c) Both | d) None |

Q.4. Patients tend to express feelings of security or insecurity in different ways. As a care and community health professional, you must learn to watch for, pick up on and interpret these signs. The following lists contain a few signs of insecurity:

- | | |
|-------------------------------------------------|--------------------------------|
| a) Patient rarely expresses insecurity directly | b) Patient feel well informed |
| c) Speech is quit, uneven and indistinct | d) Admission to an institution |

Q.5 Which of the following waste category with its respective color code for containers is correctly matched?

- | | |
|----------------------------------|--------------------------|
| a) Microbiological waste- yellow | b) Waste sharp- black |
| c) Discarded medicines- red | d) Incineration ash-blue |

Q.6. Antibiotics are used for:

- | | |
|-----------------------------------------------|------------------------------|
| a) Are drugs used against bacterial infection | b) Are drug used lose weight |
| c) Are drugs used protect against bacteria | d) Are drugs used stay young |

Q.7. In hospital waste management, plastic bag of which color is not used?

- | | |
|-----------|---------|
| a) Green | b) Blue |
| c) Yellow | d) Red |



Q.8 The most popular and useful method for sterilization is:

- a) Boiling
- b) Autoclave
- c) Sunlight
- d) Ionizing radiation

Q.9. The agent which kills pathogenic bacteria is called:

- a) Asepsis
- b) Disinfectant
- c) Fomite
- d) Bacteriostat

Q.10. Why is important to wash your hand before meal?

- a) Most food has germ in it
- b) You might touch your mouth while you eat
- c) The food may not have been prepared in a clean environment
- d) You may not have enough napkins

Section – B

04X04 = 16 Marks

Q.1. Define infectious diseases. Explain the causes of infectious diseases.

Q.2. Define nosocomial infections. Write down the antisepsis and asepsis.

Q.3. What does good contact require?

Q.4 Write down the four principle of personal hygiene.

Section – C

04X06 = 24 Marks

Q.1. Write down the three difference between disinfection and sterilization.

Q.2. Define security. Write down the signs and various factors of security.

Q.3. Define occupational safety. Write down the difference between occupational accidents and disease.

Q.4. What is aim of hand hygiene.

*I/c
amp/ast*



BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1102

Answer key

Time: 2 Hours

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Max. Marks: 50

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- c) The food may not have been prepared in a clean environment
- d) You may not have enough napkins

Section – B

04X04 = 16 Marks

Q.1. Define infectious diseases. Explain the causes of infectious diseases.

Pathophysiology – Infection diseases

An infectious disease is the consequence of infection with pathogens. Infections can only occur, however, if the person concerned has no immunity against these pathogens.

Causes

Various types of pathogens can cause an infection

Bacteria are fast-multiplying single-cell organisms with a metabolism of their own. They can also survive and multiply outside of a host organism. They adapt well to various environmental conditions. Basic shapes: cocci, rods, spirals, e.g. Streptococci → pneumonia.

Viruses are tiny pathogens that need a host to multiply. Viruses only possess genetic information (DNA) and a protein shell, e.g. influenza → flu

Fungi are organisms whose metabolic properties offer some very useful applications. A few types of fungi can also cause infections, e.g. Candida albicans → thrush.

Protozoa are parasites with a cell nucleus, e.g. amoebae → amoebiasis.

Worms are animals that live as parasites, e.g. Taenia solium → pork tapeworm.

Insects e.g. Pediculus capitis → head lice.

Q.2. Define nosocomial infections. Write down the antiseptics and asepsis.

Nosocomial infections

Nosocomial means that a patient becomes infected with an additional disease as a result of their stay in an institution. Often these infections are difficult to treat, because the pathogens may be resistant to antibiotics. Prophylactic measures for these often dangerous infections are therefore very important and are frequently the responsibility of nursing personnel.



Antisepsis = germ reduction

This incorporates measures to inactivate microorganisms using physical or chemical means. Antisepsis covers measures intended to eradicate/reduce germs on the skin (within certain parameters), and particularly the hands of medical personnel. The idea is to use disinfectant agents to prevent harmful germs from penetrating or being introduced to the body.

Asepsis = freedom from germs

Asepsis covers all measures designed to prevent pathogens from penetrating the body or contamination with germs during various interventions. Asepsis is achieved through the sterilisation of instruments, bandages and other equipment used during nursing activities. Sterilisation means the eradication of all germs (pathogenic and non-pathogenic) using physical and chemical means or radiation.

Q.3. What does good contact require?

Professional contact

The significance of a professional approach to contact in terms of well-being and the healing process cannot be overestimated. Everyone feels differently about contact. Feelings about contact will depend on the person making the contact, the contact itself (where and how?), the situation at the time and the mental state of the person being touched. Contact can be pleasant, but also very shocking. Many people have lived alone for years, for example, and are no longer used being touched. It is important to know how a person will react to closeness, distance and contact. You can find this out by observing them closely. Regardless of cultural and social differences, well-intentioned contact during nursing treatment will generally be recognized as such by all concerned and found to be pleasant enough.

We know from our own experience there will always be situations where we find it difficult to care about some- one and therefore provide them with good contact. This is a difficulty we must be aware of and come to terms with.

Good contact is:

An expression of interpersonal skills, a readiness to communicate, openness and vitality, as well as promoting well-being, a positive mood and healing.

Good contact means:

Being aware of those around us, understanding one 's own sensitivities, remaining alert to others and communicating a sense of safety and security.

Good contact requires:

A focused and considered approach, respectfulness, a lack of anxiety regarding contact, empathy, closeness, but the ability to maintain a certain distance.

Contact with other people 's bodies requires a degree of mutual trust. To build this trust, the nurse must have the following aptitudes: empathy, sympathy, appreciation and the ability to observe limits.



Q.4 Write down the Eight principle of personal hygiene.

Principles of personal hygiene

Personal hygiene requires thorough preparation. The time, duration and sequence involved should reflect the habits and condition of the patient. Respect their independence and plan personal hygiene together. Use the time spent on personal hygiene to take a look at the condition of the patient's skin and their condition in general. It is also a good opportunity to build a relationship with the patient and create an atmosphere of trust. This opens the door to conversations where those involved can also ask personal questions and speak their mind.

- Inform the patient about each care measure involved, even if they cannot respond due to linguistic or medical reasons. Pay more attention to nonverbal signs.
- If possible, make sure the patient has their hearing aid or dental prosthesis before starting personal hygiene so they can hear you better and talk to you.
- Ask about their habits and needs, and read any documentation relating to their care.
- Anything the patient can do, they should be left to do themselves.
- Never perform washing together (for example, the patient washing their arms while you wash their legs to speed things up).
- Think about people's intimate sphere: only uncover/undress patients to the extent necessary and draw the curtain or provide a sight screen.
- Always ask before touching a person in intimate areas. You might say something like 'Do you mind if I see whether the skin under your breast is red?'
- Only use bath towels for drying after bathing/showering; when washing someone, only use them to cover the person up.
- Dispose of any strong-smelling material immediately in the waste bin, which should be emptied once personal hygiene is complete.
- Make sure you apply hygiene principles consistently.
- Try and minimize any strain on your back as you work.

Section – C

04X06 = 24 Marks

Q.1. Write down the three difference between disinfection and sterilization.

Desinfectant agents

Active ingredient	Application	Effect
Alcohol	Hand disinfection Skin disinfection	Fast-acting (within seconds) Often inadequate against fung / spores
Aldehydes, peracetic acid,	Surface disinfection Device in rooms / instruments	Effects lasts for up to an hour Biodegradable
O ₂ – realising agents Halogens, e.g. Iodine	Laundry disinfection Waste water disinfection Swimming	Chlorine has a bleaching effect



pools

Octenidine	Disinfection of mucosa Wound disinfection	Effective against bacteria, stick rigidly to the application time
Ammonium	Devices Surface disinfection	Non-toxic, may also be used in kitchens

Sterilisation

Sterilisation is intended to achieve complete eradication of germs. This means all microorganisms are killed and rendered harmless. Heat-resistant materials and the immediate surroundings are sterilised. A sterile environment must be created for all invasive interventions. This means the surgical environment and any utensils such as bandages and instruments must be sterile. Sterility is invariably an absolute state: either something is sterile or it is not

Various methods of sterilization

Various sterilization processes can be used to achieve an aseptic state:

Sterilisation method	Application	Effect
Steam sterilisation Used as the most reliable method	Instruments, laundry, bandages, glass-based-materials, heat-sensitive plastics, rubber	Steam in the autoclave (high-pressure sterilisation unit) penetrates the sterile material for 18 minutes at 134° C and 2-3 bar.
Plasma sterilisation	Thermolabile material	Process involving hydrogen peroxide and low temperatures
Gas sterilisation (used only rarely, because of toxicity, no further new approvals)	Optical instruments (ophthalmology), endoscopes, plastics	Formaldehyde gas at around 60°C, also peracetic acid
"Factory-sterile" radiation sterilisation	Used for the manufacture of single-use items (catheters, plastic items etc.) in an industrial setting, comparatively expensive	e.g. X-rays, gamma rays. Sterilisation is performed at low temperature and is also suitable for temperature-sensitive substances.

Q.2. Define security. Write down the signs and various factors of security.

Security

The term security comes from the Latin word 'securus' and means carefree, unconcerned, secure. It is important for all of us to feel secure and achieve security so we can go about our day-to-day business. For the most part, creating a sense of security also means ensuring protection against things like accidents, fires and infection. Security also means taking care of oneself, other people and the environment.

A person's feeling of security is influenced by various factors:

Biological factors

- stage of development and age
- bodily functions



Psychological factors

- personal integrity
- sense of belonging, love
- esteem and dignity
- self-esteem

Sociocultural factors

- socialisation
- position in terms family, job and society
- cultural appreciation
- role

Environmental factors

- environment: urban, rural
- access to infrastructure such as health care

Signs of security

- patient expresses their desires and aims;
- patient knows their own rights;
- patient feels well informed;
- patient is ready to accept responsibility;
- patient 's speech is appropriate, audible and clear;
- patient has an upright, open posture and stands firmly on both feet;
- patient does not keep making sudden changes of position, but keeps reasonably still (eg.sitting);
- patient has an open gaze, they can look the other person in the eye, their facial expressions are relaxed.

Q.3. Define occupational safety. Write down the difference between occupational accidents and disease.

Occupational safety

Safety in the workplace is governed by a series of ordinances and laws. Nobody should be prevented from earning a living as a result of accidents or diseases suffered at work. Apart from any physical and psychological problems these may cause, they can also lead to financial difficulties. Occupational safety refers to the pre-vention of occupational accidents and diseases and the promotion of both safety in the workplace and the general well-being and satisfaction of employees. Health and productivity are vitally important for both people and the economy. Workplace health promotion is aimed at:

- reducing workplace accidents and thereby avoiding additional costs
- customer and employee satisfaction
- increasing productivity without any detrimental effect on health
- improving quality and ensuring a good corporate image.



Occupational accidents

When physical damage is sustained during the performance of one 's occupation, this is referred to as an occupational or workplace accident. Common occupational accidents include:

- cuts and puncture injuries suffered by health care personnel
- back and/or skeletal damage sustained, for example, by nursing personnel or construction workers
- falls
- amputation injuries (e.g. carpenters).

Occupational diseases

Occupational diseases are caused by harmful influences (e.g. chemical, physical) in the work place. It is often Basis of chronic disease processes with the potential to render someone partially or totally incapable of work- ing.

Occupational diseases are frequently caused by

- **chemical influences**
Examples: diseases caused by poisoning from heavy metals like mercury, Lead and cadmium; by solvents such as paints, varnishes and cleaning agents or gases like carbon monoxide
- **physical influences**
Examples: excessive strain on individual joints such as damage to discs in the spinal column, joint disease; hearing problems caused by noise; eye disease caused by light radiation
- **communicable diseases**
Examples: from humans to humans or animals to humans; infections because of working in a laboratory or a health care setting; tropical diseases, hepatitis
- **negative effects associated with dust**
Examples: bronchial carcinoma, allergic reactions, chronic obstructive pulmonary disease, pneumoconiosis mainly triggered by contact with asbestos, silica, flour e.g. construction work- ers, bakers
- **skin diseases**
Examples: allergic reactions cause by contact with various substances, e.g. contact eczema caused by disinfectant agents or latex gloves
- **psychological influences**
Examples: stress, excessive strain, frequent night work.

Q.4. What is aim of hand hygiene.

Hand washing (or handwashing), also known as hand hygiene, is the act of cleaning hands for the purpose of removing soil, dirt, and microorganisms. The main medical purpose of washing hands is to cleanse the hands of pathogens (like bacteria or viruses) and chemicals which can cause harm or disease.

The aim of hand hygiene is to prevent the transmission of pathogens and thereby avoid nosocomial infections. Patients, personnel and visitors should be protected against pathogens



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(e.g. hepatitis or HIV). Since every patient can be a source of pathogens, personnel must comply with hand hygiene in all their dealings with patients and across all areas.

Hand hygiene includes:

- hand disinfection
- hand washing and
- hand care.

Hand disinfection

When?	<ul style="list-style-type: none"> • Before and after any client contact • Before and after any aseptic treatment • After contact with bodily fluids • After contact with contaminated object, e.g. bed, bedside table • After removing gloves • After sneezing, coughing, wiping nose
How?	<ul style="list-style-type: none"> • Dispense an alcohol-based hand disinfectant into the dry palm of your hand • Rub both hands together well until the skin is dry (for at least 30 seconds)

Please note!

- Do not apply hand disinfectant to wet or dirty hands
- When applying disinfectant, it is not unusual to forget the thumbs, the fingertips, the area between the fingers or the folds of skin on the palm of the hand
- If applied correctly, the moisturising agent in the hand disinfectant should take effect and the skin will be protected

Hand disinfection is preferable to hand washing because it is more efficient, gentler, faster and cheaper. Hands do still need to be washed, however.

Hand washing

When?	<ul style="list-style-type: none"> • When starting and finishing work • Before handling food • Before and after food breaks • If hands are visibly dirty • After using the bathroom
How?	<ul style="list-style-type: none"> • Wet the hands • Rub normal liquid soap into the hands wrists for at least 30 seconds • Rinse thoroughly with water • Dry with a paper towel
Please note!	<ul style="list-style-type: none"> • Turn off the tap with the used paper towel • When washing hands, it is not unusual to forget the thumbs, the fingertips, the area between the fingers or the folds of skin on the palm of the hand • Disinfection soaps are only used in specific areas of the hospital

Hand washing steps



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Hand care

Regular hand care is required to prevent the skin becoming damaged (irritated, broken in places) as a result of frequent washing or disinfection.

When?	<ul style="list-style-type: none">• During winter, when the skin is dry• Before lengthy breaks• After finishing work
How?	<ul style="list-style-type: none">• Rub hand cream into clean hands
Please note!	<ul style="list-style-type: none">• Damaged, broken skin provides a better habitat for pathogens not associated with normal skin flora, e.g. methicillin-resistant Staphylococcus aureus (MRSA).• Nails should be cut short and kept clean, with no nail varnish. Rings and nail varnish are great places for pathogens to hide and should not be worn if possible. Please observe any in-house guidelines.• Never disinfect wet hands as this too causes skin to dry out.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: ^{SHP}1103

Time: 2 Hours

Course Name: Body Mechanics and Positioning

Max. Marks: 50

Instruction:

1. SECTION-A: Answer all questions from section A. Each question carries 01 mark
2. SECTION-B: Answer all questions from section B. Each question carries 04 marks
3. SECTION-C: Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Principles related to body mechanics are:

- | | |
|--------------|---------------|
| a) Bernoulli | b) Archimedes |
| c) Newton | d) Ergonomics |

Q.2. How much drink necessary for gout patient?

- | | |
|---------------------|---------------------|
| a) At least 500 ml | b) At least 800 ml |
| c) At least 2000 ml | d) At least 1500 ml |

Q.3. Kinesthetic is known as:

- | | |
|---------------------------------|------------------------|
| a) Emotional support | b) Reflection of light |
| c) Study of perception movement | d) Study fracture |

Q.4. When moving a heavy object, it is best to:

- | | |
|------------|--------------|
| a) Push it | b) Pull it |
| c) Roll it | d) Forget it |

Q.5. Which part of the body is affected by arthroses disease?

- | | |
|-----------------|------------------|
| a) Hip Joint | b) Knee Joint |
| c) Both a and b | d) None of above |

Q.6. Crepitation means:

- | | |
|-----------------------------|---------------------|
| a) Tangling rubbing of bone | b) Visible fragment |
| c) Loss of function | d) Swelling |

Q.7. Full form of CT-Scan

- | | |
|------------------------|-------------------------|
| a) Complete tomography | b) Computed tomography |
| c) Computer tomography | d) Complete temperature |

Q.8. What is the biological factor of fall?

- | | |
|----------------|---------------|
| a) Hypotension | b) Carpets |
| c) Stairs | d) Poor light |



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Q.9. Cramp also known as:

- a) Involuntary pain
- b) Short of breath
- c) Involuntary clenching of the muscle
- d) Tiredness

Q.10. Body mechanics refers to:

- a) The use of the body to produce motion
- b) The use of the mechanical devices to move the body
- c) People who make mechanical devices for the body
- d) Helping residents use their bodies correctly

Section – B

04X04 = 16 Marks

- Q.1. How to change our life from movement?
- Q.2. Define kinesthetic. Write down the prevention of gout.
- Q.3. Define rheumatoid arthritis. Write down the four symptom and treatment of rheumatoid arthritis.
- Q.4. Write down the eight fall prevention measures.

Section – C

04X06 = 24 Marks

- Q.1. Define fracture. Explain the types of fracture.
- Q.2. Explain the pathophysiology of general immobility.
- Q.3. Explain the decubitus prophylaxis.
- Q.4. Define arthroses. Write down the four causes, symptom and treatment of arthroses.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: 1103

Course Name: Body Mechanics and Positioning

Time: 2 Hours

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Principles related to body mechanics are:

- a) Bernoulli
- b) Archimedes
- c) Newton
- d) Ergonomics

Q.2. How much drink necessary for gout patient?

- a) At least 500 ml
- b) At least 800 ml
- c) At least 2000 ml
- d) At least 1500 ml

Q.3. Kinesthetic is known as:

- a) Emotional support
- b) Reflection of light
- c) Study of perception movement
- d) Study fracture

Q.4. When moving a heavy object, it is best to:

- a) Push it
- b) Pull it
- c) Roll it
- d) Forget it

Q.5. Which part of the body is affected by arthroses disease?

- a) Hip Joint
- b) Knee Joint
- c) Both a and b
- d) None of above

Q.6. Crepitation means:

- a) Tangling rubbing of bone
- b) Visible fragment
- c) Loss of function
- d) Swelling

Q.7. Full form of CT-Scan

- a) Complete tomography
- b) Computed tomography
- c) Computer tomography
- d) Complete temperature

Q.8. What is the biological factor of fall?

- a) Hypotension
- b) Carpets
- c) Stairs
- d) Poor light



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- b) Short of breath
- c) Involuntary clenching of the muscle
- d) Tiredness

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- a) The use of the body to produce motion
- b) The use of the mechanical devices to move the body
- c) People who make mechanical devices for the body
- d) Helping residents use their bodies correctly

Section – B

04X04 = 16 Marks

Q.1. How to charge our life from movement?

Patterns of movement tend to charge our life

- Babies will move from where you lay them down. They only have a limited capacity to choose and change position freely and independently.
- Young children learn how to crawl and then walk independently. The next step will be cycling possibly with stabilizers to start with. Children learn gradually more to coordinated in their movements and their micro motor skills becoming more deliberate as they learn, for example, to eat on their own.
- Adults can generally move without restriction.
- Events such as accidents, illness and disability may lead to a temporary or lasting loss of independence during a person 's life. This will have an impact on their mobility and movement.

With the starting of old age, our independence — including in terms of movement — may decline as a result, for example, of a loss of strength and/or tarnished mental faculties. This may often make us reliant on support from others such as family members or nursing personnel or from various aids.

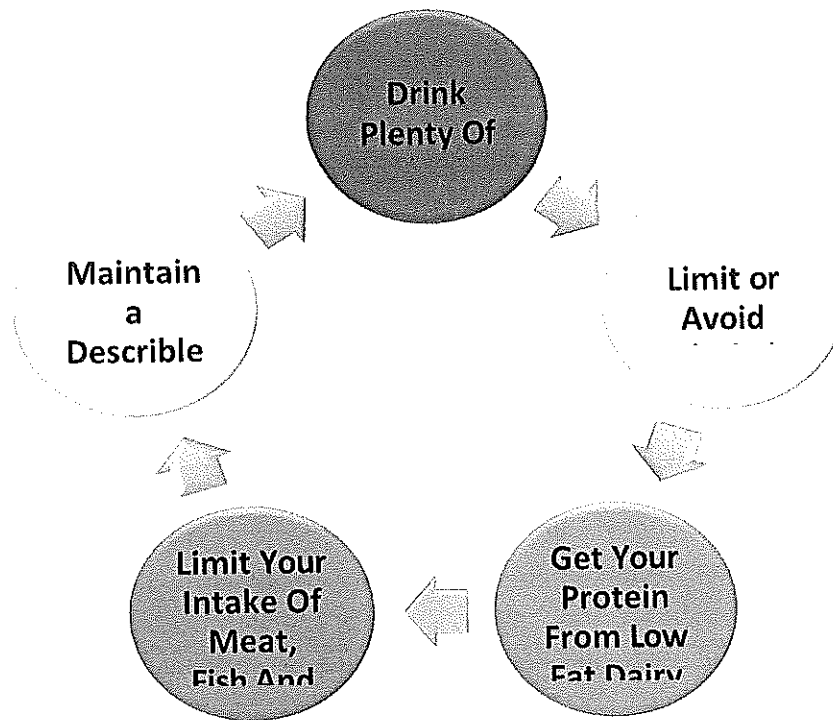
Q.2. Define kinesthetic. Write down the prevention of gout.

Kinaesthetics

Kinaesthetics — what is it? The concept of kinaesthetics was established by Americans Lenny Marietta and Frank Hatch. The term is derived from the Greek kinesis (= movement) and aesthesis (= sensitivity). Kinaesthetics refers to the study of the perception of movement. It is concerned with contact and perception. Kinaesthetics favors natural, original and harmonious sequences of movements and promotes health and independence.



Prevention



Q.3. Define rheumatoid arthritis. Write down the four symptom and treatment of rheumatoid arthritis.

Inflammatory rheumatism (rheumatoid arthritis)

Rheumatoid arthritis is a chronic inflammatory disease of the connective, supporting and muscle tissue. It tends to follow an episodic course and symptoms mainly affect the joints.

Symptoms

- Stiff joints for more than 15 minutes in the morning
- Inflammation affecting 3 or more joints (arthritis), often following a symmetrical pattern with both sides involved at the same time
- Swelling of joints
- Overheating of joints
- Joint pains at night and in the morning
- Tiredness
- Exhaustion Long-term
- Atrophy of the associated muscles due to lack of joint activity
- Visible changes and misalignment of joints

Treatment

- Physical treatment: application of heat or cold depending on the patient 's condition, hydro therapy, spa therapies, massage
- Movement therapy in order to preserve joint function
- Ergotherapy and rehabilitation
- Changes in nutrition
- In terms of medication, there will be a basic treatment the patient needs to take all the time with a view to mitigating the disease. Examples include Methotrexate®, Sandimmun
- Surgical: synovectomy, use of artificial joints, arthrodesis



Q.4. Write down the eight fall prevention measures.

Fall prevention measures

General measures

- The patient must be encouraged to familiarise themselves with their environment and repeat this process on a regular basis as required
- The bell should be working properly and in easy reach
- The bed is set to its lowest level (close to the floor) after each nursing measure, particularly at night
- Wheels must be locked when stationary, e.g. rollator wheels during transfers
- Walkways must be kept clear (no equipment or furniture in the room or along corridor walls)
- Corridors must have adequate lighting. The patient must know where light switches are.
- It is important the patient wears safe footwear with sufficient grip
- Weaker patient's lacking in confidence are accompanied, supported or held as they walk (let the patient walk at their own pace)
- Older patient's suffering from urinary incontinence are accompanied to the toilet at set times
- Aids are adapted to the patient for clean lenses in spectacles, working hearing aids, adapted walking sticks)
- Regular walking or stair climbing should be part of the daily routine
 - Non-slip mats are used in the bath or shower
 - Confused people should be monitored on a regular basis.

Section – C

04X06 = 24 Marks

Q.1. Define fracture. Explain the types of fracture.

Fractures

A fracture is when a bone breaks.: A bone fracture is a medical condition in which there is a partial or complete break in the continuity of the bone. Bone fragments may be displaced or not. Fractures are classified as:

Direct or indirect fracture	The bone breaks where the force was applied (direct fracture) or not directly where the force was applied (indirect fracture)
Open or closed fracture	If there is no injury to the skin above the fracture, this is a closed fracture. If there is some injury to the skin and other soft tissue (muscles, nerves, tendons, blood vessels), this is referred to as an open fracture
Complete or incomplete fracture	With a complete fracture, 2 fragments are separated by a fracture gap. With an incomplete fracture, there is no complete break in the bone (fissure, infraction)
Simple fractures or multiple fractures	E.g. comminuted fracture



Q.2. Explain the pathophysiology of general immobility.

Pathophysiology – general

There are many diseases that restrict a person's mobility. For example, the musculoskeletal system may be affected directly by things like bone and joint diseases. Diseases of the brain and nervous system may make it impossible or difficult to control sequences of movements. Psychiatric disorders may also have an impact on mobility. This can be seen, for example, in those with depression, who often perform movements very slowly. The descriptions below provide more details regarding some of the most important changes:

Paralysis	The motor functions of the affected muscle can no longer be initiated or activated voluntarily. A distinction is made between paresis and a plegia affecting a part of the body or an organ. A further distinction is made between spastic paralysis or flaccid paralysis.
Trembling/ tremor	Depending on the kind of trembling involved, a distinction is made between coarse and fine tremor. Various main diseases may be involved. Coarse tremor can be seen, for example, in people with Parkinson's disease.
Restlessness	This can take different forms in different people, including continuously wandering around, constant fumbling movements or a pressing desire to get out of bed.
Cramps	Cramps take the form of involuntary clenching of the muscles. A distinction is made between tonic cramps, a term which refers to tensing of the muscles, and clonic cramps where muscles twitch repeatedly in quick succession.
Relieving postures	These are postures that provide the patient with some relief so tend to be adopted quite frequently — and mainly unconsciously. Examples include drawing one's legs up when experiencing abdominal pain or sitting upright when short of breath.
Forced postures	Forced postures may occur for example, when parts of the body or limbs are immobilized when wearing a plaster cast or splint.

Q.3. Explain the decubitus prophylaxis.

A decubitus ulcer is a pressure sore caused by reduced circulation in the skin.

- Prophylaxis
- Prophylaxis covers all precautionary measures intended to prevent the development of a decubitus ulcer.

Application to the typical Situation

Situation-specific communication

- Read the typical situation and make a note of the communication examples mentioned.
- Play out the typical situation in pairs, thinking about which are the most significant scenarios and why.
- What does Chitra need to tell the nurse responsible?



Situation-based learning

- What safety measures does Chitra need to observe when she is mobilizing Mr. Khan? What checks must Chitra perform regarding extremities in plaster? What can be done to improve restricted mobility due to polyarthritis?
- What can Chitra do to relieve the patient's pain without actually administering analgesics? What support does Mr. Khan need with eating and drinking?
- For what daily routines of Mr. Khan is he reliant on support as a result of his fractures? What prophylactic measures should Chitra adopt in relation

Q.4. Define arthroses. Write down the four causes, symptom and treatment of arthroses.

Degenerative joint diseases (arthroses)

Arthroses are chronically degenerative joint changes that lead to destruction of the surfaces of joints (articular cartilage and bone). In most cases, the joints that bear the weight of the body tend to be affected (hip, knee and vertebral joints).

Causes/risk factors

- Unknown
- unphysiological burden (i.e. an incorrect or excessive load) on a joint
- Excess weight
- Excessive strain during sport
- Skeletal malformations, e.g. knock knees, congenital hip dysplasia
- Badly healed fractures
- Loads endured at work (eg. builders)

Symptoms

- Feeling stiff around the affected joint, particularly in the morning, joints feeling a bit 'rusty'
- Pain: onset-type pain at first (pain when stress begins), followed by stress-related pain (proper pain as stress continues) and later pain at rest (background pain)
- Mobility restrictions
- Muscular tension and muscular contraction
- Rubbing noises
- Active arthrosis may be associated with acute inflammation, significant swelling and overheating of the joint and also considerable pain following, for example, some form of excessive strain.

Treatment

Arthrosis-related changes cannot be reversed. The aims of treatment are therefore pain relief, improved mobility and slowing the pace of joint destruction. The following measures are used for these purposes:

- Weight loss for obese patients
- Local applications of heat or cold depending on the patient's condition
- Medication to build up cartilage, e.g. glucosamine and chondroitin sulphate
- Pain - relief medication.



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- Physiotherapy to build up muscles and preserve mobility
- Remedying of posture-related damage by, for example, adjusting orthopedic inserts, surgery
- Therapeutic radiation to relieve pain
- Surgery:
 - o Replacement of joints with artificial prostheses such as a total prosthesis for the hip. These Operations are among the most common surgical interventions and affected patients find them beneficial from a pain relief and mobility perspective.

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School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1103

Set-B

Time: 2 Hours

Course Name: Body Mechanics and Positioning

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. How much drink necessary for gout patient?

- | | |
|---------------------|---------------------|
| a) At least 500 ml | b) At least 800 ml |
| c) At least 2000 ml | d) At least 1500 ml |

Q.2. The importance of using good body mechanics is to prevent?

- | | |
|---------------------|---------------------------|
| a) Abdominal injury | b) Musculoskeletal injury |
| c) Head injury | d) Chest injury |

Q.3. When moving a heavy object, you should?

- | | |
|-----------------------------|-----------------------------------|
| a) Bend your back | b) Grip it with both hands |
| c) Keep your knees straight | d) Twist your body |

Q.4. A fracture in which there is no break in the skin is known as:

- | | |
|----------------------|----------------------|
| a) Close fracture | b) Open fracture |
| c) Impacted fracture | d) Compound fracture |

Q.5. Raising the bed to a comfortable position helps prevent:

- | | |
|----------------|----------------|
| a) Arm strain | b) Back strain |
| c) Neck strain | d) Leg strain |

Q.6. Full form of CT-Scan

- | | |
|------------------------|-------------------------|
| a) Complete tomography | b) Computed tomography |
| c) Computer tomography | d) Complete temperature |

Q.7. What is the environmental factor of fall?

- | | |
|----------------|--------------------|
| a) Hypotension | b) Impaired vision |
| c) Hemiplegia | d) Poor light |

Q.8. The level of uric acid increase:

- | | |
|-----------------|-----------------------------|
| a) In arthritis | b) In myocardial infarction |
| c) Fracture | d) In gout |



Q.9. Mobility is known as:

- a) Restricted the movement
- b) Unable to freely movement
- c) Able to freely movement
- d) Bone fracture

Q.10. Ergonomics is the study of:

- a) Designing the job to fit to the worker
- b) Training the worker to fit to the job
- c) Prevention of occupational disease
- d) Recruiting the employee to fit for the job

Section – B

04X04 = 16 Marks

- Q.1. Define movement. Difference between the psychological and sociocultural factors of movement.
- Q.2. Define fracture. Write down four symptom and conservative treatment of fracture.
- Q.3. Explain the treatment of rheumatoid arthritis.
- Q.4. Write down the eight fall prevention measures.

Section – C

04X06 = 24 Marks

- Q.1. Explain the ergonomics in the workplace.
- Q.2. What do you understand fall prevention? Draw the flow chart of estimating the risk of falls.
- Q.3. Explain the decubitus prophylaxis.
- Q.4. How to deal with people in a wheelchair.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Answer key

Course Code: 1103

Time: 2 Hours

Course Name: Body Mechanics and Positioning

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

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|----------------|----------------|
| a) Arm strain | b) Back strain |
| c) Neck strain | d) Leg strain |

Q.6. Full form of CT-Scan

- | | |
|------------------------|-------------------------|
| a) Complete tomography | b) Computed tomography |
| c) Computer tomography | d) Complete temperature |

Q.7. What is the environmental factor of fall?

- | | |
|----------------|--------------------|
| a) Hypotension | b) Impaired vision |
| c) Hemiplegia | d) Poor light |

Q.8. The level of uric acid increase:

- | | |
|-----------------|-----------------------------|
| a) In arthritis | b) In myocardial infarction |
| c) Fracture | d) In gout |



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Q.9. Mobility is known as:

- a) Restricted the movement
- b) Unable to freely movement
- c) **Able to freely movement**
- d) Bone fracture

Q.10. Ergonomics is the study of:

- a) Designing the job to fit to the worker
- b) Training the worker to fit to the job
- c) **Prevention of occupational disease**
- d) Recruiting the employee to fit for the job

Section – B

04X04 = 16 Marks

Q.1. Define movement. Difference between the psychological and sociocultural factors of movement.

Movement

Mobility is most important in the modern world. It enables us to move freely and without restriction and change position as and when we want or need. An important basic principle for a high quality of life is independent and unrestricted mobility. Movement is important to everything we do: we need to be able to move to care for ourselves, eat, keep ourselves busy, breathe and take responsibility for our own safety. It is impossible to communicate without movement as we require a degree of mobility for the purposes of both verbal and non-verbal communication. Perception also becomes impossible without movement. Body language which may be pronounced from person to person, plays an important role in human communication. Movement is therefore of crucial importance to a persons' ability to live their life and the quality of that life. immobility, namely limited, restricted or even a total of lack of movement, can impair someone 's quality of life to various degrees. Each person moves in their own particular way. There are those who can never keep still and only feel good when on the move. At the other end of the spectrum is the "couch potato".

Psychological factors	A person 's mood and emotions may be reflected in their posture and movement. For example, happiness and self-confidence may be expressed in an upright gait. Depressive feelings, stress or anxiety influence the normal pattern of movement and can be detected in people 's expressions. Some people are naturally more active, while other's appetite for movement may be less pronounced.
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Sociocultural factors	An individual 's family and social life can influence their decision to undertake spe- cific movement-related activities, with, for example, children of sporty parents being encouraged to prefer sporting activities. A person 's occupation is another important factor. Those who sit down at work will have limited opportunities for movement, while those working in the great outdoors will find themselves moving quite a lot. Today 's multicultural age provides us with a chance to experience the peculiarities of individual cultures via the media, from our neighbors or on our holidays. Different forms of movement are expressed in things like dance.
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Q.2. Define fracture. Write down four symptom and conservative treatment of fracture.

Fractures

A fracture is when a bone breaks.: A bone fracture is a medical condition in which there is a partial or complete break in the continuity of the bone. Bone fragments may be displaced or not. Fractures are classified as:

Symptoms

The following symptoms are deemed to be sure signs of a fracture:

- abnormal mobility
- abnormal position
- audible or tangible rubbing of bone (crepitation)
- visible fragments of bone in the case of an open fracture.

The following symptoms are indicative of a fracture but not sufficient to justify a diagnosis:

- haematoma
- pain
- loss of function, mobility restriction
- swelling.

Conservative treatment

- plaster cast or splint applied to immobilize the fracture until the bone heals
- possibly extension: traction used to pull bone ends apart and keep them in the correct Position
- active movement of as many joints of the body as possible to prevent muscle atrophy and contractures

immediate treatment needed for wounds associated with open fractures to avoid infection

Q.3. Explain the treatment of rheumatoid arthritis.

Treatment

- Physical treatment: application of heat or cold depending on the patient's condition, hydro therapy, spa therapies, massage
- Movement therapy in order to preserve joint function
- Ergotherapy and rehabilitation



- Changes in nutrition

- In terms of medication, there will be a basic treatment the patient needs to take all the time with a view to mitigating the disease. Examples include Methotrexate®, Sandimmun
- Surgical: synovectomy, use of artificial joints, arthrodesis

Q.4. Write down the eight fall prevention measures.

Fall prevention measures

General measures

- The patient must be encouraged to familiarise themselves with their environment and repeat this process on a regular basis as required
- The bell should be working properly and in easy reach
- The bed is set to its lowest level (close to the floor) after each nursing measure, particularly at night
- Wheels must be locked when stationary, e.g. rollator wheels during transfers
- Walkways must be kept clear (no equipment or furniture in the room or along corridor walls)
- Corridors must have adequate lighting. The patient must know where light switches are.
- It is important the patient wears safe footwear with sufficient grip
- Weaker patient's lacking in confidence are accompanied, supported or held as they walk (let the patient walk at their own pace)
- Older patient's suffering from urinary incontinence are accompanied to the toilet at set times
- Aids are adapted to the patient for clean lenses in spectacles, working hearing aids, adapted walking sticks)
- Regular walking or stair climbing should be part of the daily routine
 - Non-slip mats are used in the bath or shower
 - Confused people should be monitored on a regular basis.



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Section – C

04X06 = 24 Marks

Q.1. Explain the ergonomics in the workplace.

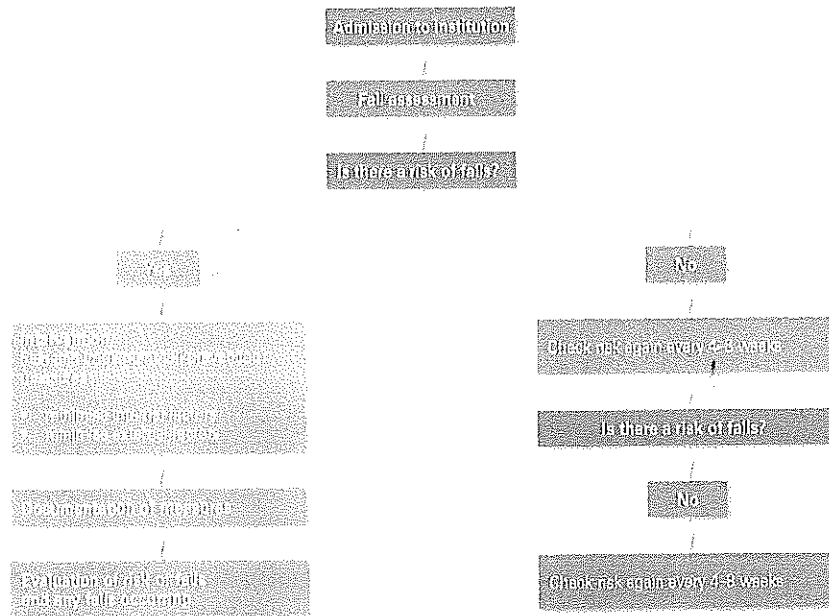
Topic	Example / Remark
<p>Work Place As regards organizing the workplace, consideration is given to body mass, posture, body strength and freedom of movement</p>	<p>If you use the Computer in the ward office to document nursing routines, you should be able to adopt a correct sitting position. The tabletop should be level with your elbows. Forearms should lie as flat as possible on the desk. Shoulders should not be hunched up. Make sure your eyes are a suitable distance (50—80 Cm) from the screen.</p>
<p>Work equipment The way we use aids, tools, desks, office chairs and the like is important.</p>	<p>A good Chair needs to be height-adjustable with a backrest. It should be possible to vary the angle of the seat.</p>
<p>Working environment Checks are performed for noise emissions, mechanical vibrations, climate, lighting and color scheme.</p>	<p>Room lighting must be bright enough for you to read without straining and see what is on the keyboard. The screen must be set up to avoid any annoying reflections from the lighting.</p>
<p>Working hours In terms of working hours, it is a case of Checking the rules regarding breaks and any flexible hours or shift arrangements.</p>	<p>Regular short breaks and a longer break for lunch provide opportunities to relax. Standing up, going to the Cafeteria and engaging with other people are good ways to revive both body and mind.</p>
<p>Work organization In terms of work organization, it is a question of defining the content of work, divide group work and ensuring people take ownership.</p>	<p>The work expected from a person should be clearly defined. Failure to do so will lead to disagreements, overlap and dissatisfaction.</p>
<p>Back-friendly working practices A large proportion of employees in nursing and care suffer from back pain. The risk of developing a disc problem (eg. herniated disc) — mainly in the lower back — is significantly higher in this profession than in others.</p>	<p>In nursing, moving not only means encouraging and supporting clients with their movements but also moving ergonomically, or physiologically, as a nurse. It is important to make sure that you stay healthy. Nurses backs are subjected to a range of stresses. It is therefore important to be aware of your own responsibility to keep your back healthy.</p>
<p>Correct lifting Avoid lifting where possible. If you do need to lift a bad, however, use the power in your legs to perform the lift and help relieve your back. Bend your knees and hips. Position yourself close as possible to the bad you want to lift. To lift the bad, push up from a squatting position using your legs and keep your back straight. Avoid making jerky or swinging movements when lifting.</p>	<p>Increase your stability by standing with your feet shoulder-width apart if possible. Make sure that you do not twist your spine sideways when lifting.</p>
<p>Correct carrying Carry the bad close to your body. The bad 's center of gravity should be vertically above the feet if possible. Distribute the bad symmetrically, i.e. evenly between the left and right side.</p>	<p>Use a trolley to transport loads if possible rather than carrying them.</p>
<p>Adjusting the working height</p>	<p>When working low down, It is advisable to sit if at all possible (eg. to measure blood pressure).</p>



Q.2. What do you understand fall prevention? Draw the flow chart of estimating the risk of falls.

Fall Prevention

A fall is an unforeseen and unintended occurrence in which the person affected hits the floor or some object with their head, trunk or limbs from a lying, sitting or elevated position.



Q.3. Explain the decubitus prophylaxis.

Decubitus Prophylaxis

A decubitus ulcer is a pressure sore caused by reduced circulation in the skin.

Prophylaxis

- o Prophylaxis covers all precautionary measures intended to prevent the development of a de- cubitus ulcer.

Application to the typical Situation

Situation-specific communication

- Read the typical situation and make a note of the communication examples mentioned.
- Play out the typical situation in pairs, thinking about which are the most significant scenarios and why.
- What does Chitra need to tell the nurse responsible?

Situation-based learning

- What safety measures does Chitra need to observe when she is mobilizing Mr. Khan? What checks must Chitra perform regarding extremities in plaster? What can be done to improve restricted mobility due to polyarthritis?
- What can Chitra do to relieve the patient's pain without actually administering analgesics? What support does Mr. Khan need with eating and drinking?
- For what daily routines of Mr. Khan reliant on support as a result of his fractures? What prophylactic measures should Chitra adopt in relation to Mr. Khan? Describe and give reasons for the individual measure



Q.4. How to deal with people in a wheelchair.

Walking and mobilization aids

Various walking and mobilization aids are used for patients with restricted mobility. The essential thing is to ensure these aids are tailored to the individual person and keep on reviewing whether they are still necessary.

Principles

- Walking and mobilization aids such as walking sticks or a rollator must always be tailored to the patient with a view to preventing misalignments or malpositioning. Individual adjustments are crucial to ensuring optimal use and safety.
- Walking sticks should have a rubber tip and a cushioned grip. The elbow of someone using a walking stick should be bent by some 30°. If just the one stick is used, it should generally be on the 'healthy' side to provide some relief for the affected side.

Basic rules for dealing with people in a wheelchair

- The general idea is to provide the patient with a sense of security
- Push the wheelchair in front of you (do not drag it backwards). This helps the person in the wheelchair to keep their bearings and provides you with a clearer view
- A person sitting in a wheelchair has a different eye line from a person standing upright. In view of this, make sure you are level with their eyes when talking to them. A wheelchair can only move efficiently if its tyres are fully inflated. With this in mind, check the tyres on a regular basis
- Carry out regular maintenance on the wheelchair or have this done by the technical services area
- If the wheelchair is at rest, put the brake on for safety reasons
- Place an anti-decubitus cushion on the seat as required for those with a significant degree of immobility
- Transfer with support: fold the footrest away and/or remove it. You may also need to remove the armrests. Caution: risk of falls!
- Adjust your speed to the relevant conditions.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1104

Set A

Time: 2 Hours

Course Name: Nutrition & Elimination I

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Anamnesis is known as:

- | | |
|------------------------|-------------------------|
| a) History collection | b) Physical examination |
| c) Physical assessment | d) Blood test |

Q.2. Full form of BMI:

- | | |
|----------------------|----------------------|
| a) Body mass index | b) Body muscle index |
| c) Bodies mass index | d) Bundle mass index |

Q.3. Hematuria is known as:

- | | |
|-------------------------------|----------------------------|
| a) Presence of blood in urine | b) Normal urine |
| c) Pus with urine | d) Pain during micturition |

Q.4. What is included in light balanced diet?

- | | |
|-------------------|---------------------|
| a) Carrots | b) Steamed potatoes |
| c) Fried potatoes | d) All of above |

Q.5. Inflammation of urinary bladder is known as:

- | | |
|------------------|--------------|
| a) Cholecystitis | b) Cystitis |
| c) Endosystitis | d) Carcinoma |

Q.6. Most common cause foe excessive fluid excretion:

- | | |
|-------------------------------------------|----------------------------|
| a) Physical exertion | b) Normal body temperature |
| c) Taking medicine against blood pressure | d) Hypoglycaemia |

Q.7. What is symptom of obstipation:

- | | |
|-----------------------|---------------------------|
| a) Wet stool | b) Pain during defecation |
| c) Frequent defection | d) No abdominal pain |

Q.8. What is normal specific gravity of urine?

- | | |
|----------------------|------------------------|
| a) 1011 – 1025 mg/ml | b) 1010 – 1025 mg/ml |
| c) 1010 – 1025 mg/dl | d) 1010 – 1025 mg/lit. |



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Q.9. A new-born babies how many times of micturition per day?

a) 6 – 8 times

b) 4 – 6 times

c) 8 – 10 times

d) 12 – 18 times

Q.10. How much liquid used for rinse the tube?

a) 20 – 50 ml

b) 30 – 60 ml

c) 23 – 30 ml

d) 20 – 100 ml

Section – B

04X04 = 16 Marks

Q.1. Draw the chart of food pyramid.

Q.2. Weight of a man is 25 kg and height is 115 cm. Calculate his BMI using the formula and indicate the Condition.

Q.3. Write down the nutrition requirement for adolescent and elderly person.

Q.4 Write down the two general principles of nutritional intake.

Section – C

04X06 = 24 Marks

Q.1. Define dysphagia. Write down the four causes and nursing measures of dysphagia.

Q.2. Define cystitis. Write down the four causes, symptom and prevention of cystitis.

Q.3. What do you mean disgust? Describe the strategies against disgust.

Q.4. Explain the trans nasal and PEG tube.

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School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1104

Course Name: Nutrition & Elimination I

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Max. Marks: 50

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Section – A

10X01 = 10 Marks

Q.1. Anamnesis is known as:

- a) History collection
- b) Physical examination
- c) Physical assessment
- d) Blood test

Q.2. Full form of BMI:

- a) Body mass index
- b) Body muscle index
- c) Bodies mass index
- d) Bundle mass index

Q.3. Hematuria is known as:

- a) Pain during micturition
- b) Normal urine
- c) Pus with urine
- d) Presence of blood in urine

Q.4. What is included in light balanced diet?

- a) Carrots
- b) Steamed potatoes
- c) Fried potatoes
- d) Both a and b

Q.5. Inflammation of urinary bladder is known as:

- a) Cholecystitis
- b) Cystitis
- c) Endosystitis
- d) Carcinoma

Q.6. Most common cause of excessive fluid excretion:

- a) Physical exertion
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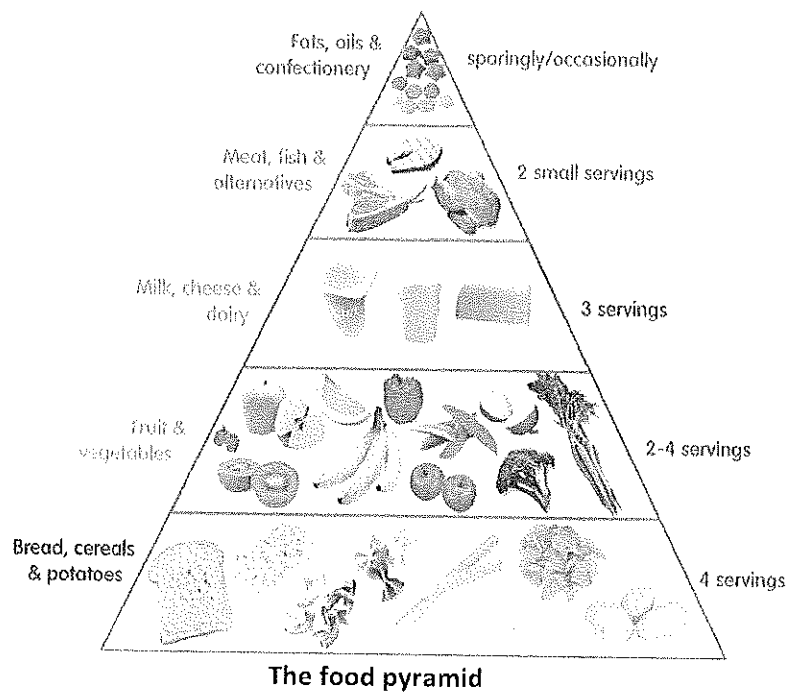
Q.10. How much liquid used for rinse the tube?

- a) 20 – 50 ml
- b) 30 – 60 ml
- c) 23 – 30 ml
- d) 20 – 100 ml

Section – B

04X04 = 16 Marks

Q.1. Draw the chart of food pyramid.



Q.2. Weight of a man is 25 kg and height is 115 cm. Calculate his BMI using the formula and indicate the Condition.

$$\text{BMI} = \frac{\text{weight in kg}}{(\text{height in m})^2}$$

$$\text{BMI} = 25/1.32 = 18.93$$

The condition is normal



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Q.3. Write down the nutrition requirement for adolescent and elderly person.

Adolescent	Adolescents learn to take responsibility for their own nutrition, e.g. by choosing their own Lunch or cooking at home now and again. They are still open to different external influences and they also learn to deal with alcoholic drinks. At this age, it is particularly important that they are educated about the benefits of a healthy diet and the harmful effects of making the wrong choices.
Elderly person	Eating the right foods is particularly important in old age in order to stay healthy. The body 's cells need less energy as they are less active. However, the body still needs the same volume of vitamins, minerals and protein. The digestive organs function less well and the sense of smell and taste deteriorate. Problems with chewing and swallowing can sometimes.

Q.4 Write down the two general principles of nutritional intake.

General principles for supporting nutritional intake

Helping patients to be active	Many patients in long-term care are able to help with preparation, cooking, serving, setting the table and clearing away. All of these activities stimulate the appetite.
Atmosphere	As a Medical Nursing Assistance, you not only have a great deal of responsibility with regard to eating and drinking. A plate of food from the kitchen can be made to look even more attractive, e.g. through the addition of fresh herbs or a thoughtful decoration. It is very important that the daily assistance you provide does not become a simple matter of routine.
Documentation	Information about eating and drinking is collected from everybody. This information includes wishes and habits, nutritional state, behaviour and difficulties in relation to eating and drinking, the need for assistance, changes due to disease and any physical aids required. All of these are recorded in the nursing documentation and as a Medical Nursing assistance, you need to first consult this documentation.
Communication	This requires empathy, patience and the willingness both to deal with ethical issues and to reflect on your own conduct. A professional approach is also reflected in the language you use.

Section – C

04X06 = 24 Marks

Q.1. Define dysphagia. Write down the four causes and nursing measures of dysphagia.

Difficulties with eating and drinking

Eating and drinking can also be affected. You have important basic knowledge about common problems which arise in association with eating and drinking.

Chewing and swallowing

difficulties *Dysphagia* is difficulty in swallowing when eating.



Causes

Chewing and swallowing difficulties can be caused by the following:

- Inflammatory changes, Fungal infection of the oral mucous membrane
- Age-related changes, such as the loss of teeth or poorly fitting dentures
- Parkinson 's disease, Stroke
- Multiple sclerosis
- Coughing, clearing the throat, sneezing before, during or after eating or drinking
- Change to the voice, e.g. raspy, hoarse or husky voice
- Solid or liquid nutrition or saliva escaping from the mouth
- Collection of bits of food in the mouth and cheek pouches
- Gurgling noises when swallowing
- Very slow eating
- Comments about pain in the throat or chest when swallowing
- Unintentional weight loss
- Dehydration, Food refusal
- Raised or fluctuating body temperature
- Pneumonia where the cause is unclear

Nursing measures for chewing and swallowing difficulties

Guidelines for administering food to people with swallowing difficulties are generally set out in a nursing stand- ard in the institution. Another person should always be present when people with swallowing difficulties are eating and drinking. This person should ensure that:

- Foods are offered which are soft but still encourage chewing.
- Small, frequent meals offered, people with swallowing difficulties tire easily when eating.
- Drinks are always offered at mealtimes too, should not be given until the end of the meal.
- The dishes should not be overly browned or spiced, foods of this kind irritate the mucous membranes and can lead to coughing and choking.
- No unsuitable dishes are offered, such as
 - dry, crumbly foods, e.g. biscuits, rusks
 - glutinous foods, e.g. fresh bread
 - foods with stringy fibres, e.g. green beans, rhubarb, celery
 - foods which involve different consistencies, e.g. soup with croutons

Q.2. Define cystitis. Write down the four causes, symptom and prevention of cystitis.

Cystitis

Cystitis is an infectious inflammation of the urinary bladder

Causes

It is estimated that 1 woman in 3 will suffer with cystitis at least once in her life. The reasons are as follows:



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- The fact women have a short urethra means germs are better able to reach the urinary bladder.
- In women, the opening of the urethra is closer to the anal area, which means intestinal germs may enter the urethra via a smear infection. This is why it is important always to work from the front back-wards when cleaning the anal area following a bowel movement.
- Sexual intercourse is one of the more common causes of cystitis (honeymoon cystitis). Bacteria may also reach the bladder when someone inserts a tampon.
- Pregnancy and childbirth facilitate access for germs.
- Estrogen deficiency during and after the menopause favors the proliferation of germs. Both genders may experience cystitis as a result of urinary obstructions caused by urinary stones or narrowing of the urethra

Symptoms

The mucosa in the bladder responds by becoming red, swollen and hypersensitive. The extension that occurs during filling is experienced as a stimulus and emptying is duly triggered. Common symptoms are pain during urination, pollakiuria and nocturia. Heavily inflamed and slightly bloody mucosa will lead to hematuria. It is not unusual to experience pain in the lower abdomen too (above the symphysis). Fever does not occur with uncomplicated urinary tract infections. Episodic bouts of fever should raise suspicions of pyelonephritis or urosepsis.

Prevention

A high fluid intake increases urinary excretion and is a good way of ensuring the efferent urinary tract is properly flushed out. When passing water, it is important to empty the bladder completely. This prevents any significant proliferation of germs in residual urine. Passing water after sexual intercourse flushes out the urethra and removes any bacteria transmitted. Following a bowel movement, it is essential always to work from the front backwards when cleaning the anal area to prevent any intestinal bacteria accessing the urethra.

Q.3. What do you mean disgust? Describe the strategies against disgust.

Disgust

Those employed in a nursing role on a day-to-day basis may feel some disgust when dealing with excretory products. The main thing to realise is that disgust is a natural! feeling and an important and even healthy reaction. Feelings of disgust are a form of protection. Extreme physical proximity and dealing frequently with bodily fluids in a nursing role can trigger adverse reactions such as disgust. Physiologically speaking, disgust triggers increased secretions from the salivary glands and blood supply to the head also increases slightly. The resulting gag or vomiting reflex is also, among other things, a physical protective function against poisoning.



Strategies

The following rules and strategies may prove helpful for both patients and nursing personnel in terms of dealing with feelings of disgust:

- **Using gloves when dealing with bodily fluids**
 - it is not just important to wear gloves for hygiene purposes. It also makes it clear that contact with the genitals has no sexual connotations.
- **Protective gowns in intimate nursing situations**
 - wearing a protective gown when working close to a person's body makes it clear that excessively close contact is nothing personal, but is required as part of the nurse's duties.
- **Performing unpleasant**
 - work in teams of 2 or 3. a feeling of team spirit can make things much easier to bear.
- **Rotating unpleasant work**
 - rotating unpleasant work around members of a team has been proven to work. This avoids a situation where the same person is always stuck with this kind of work.
- **Forced ventilation**
 - if the air in a room is very unpleasant, it is a good idea to ventilate the room for 5 minutes about half an hour before going to help someone in this room and then close the window once more and wait until the ambient air warms up again.

Q.4. Explain the trans nasal and PEG tube.

Trans nasal Tube

If this tube is several days, there is a risk of pressure ulcers on the nose. In addition, the tube means a permanent irritation for the nasal mucosa and the pharynx. The fixation of the tube must be carried out in such a way that no pressure is exerted on the nasal septum or the lobes. Because of mucous membrane irritation, increased secretion can occur in the nose. A regular nose care with removal of secretions possibly application of nasal ointment is therefore essential. In order to prevent the patient from swallowing, the tube must be checked for the correct position before each administration of the food:

- A Check the fixation and the external marking
- Aspirate a gastric juice, if possible, inject air into the tube and auscultate with the stethoscope over the stomach, a slight bubbling should be heard.

If no gastric juice aspirates and the air is not heard during injection, it can be assumed that the tube has slipped. In this situation it is not allowed to tube and the qualified nurse must be informed.

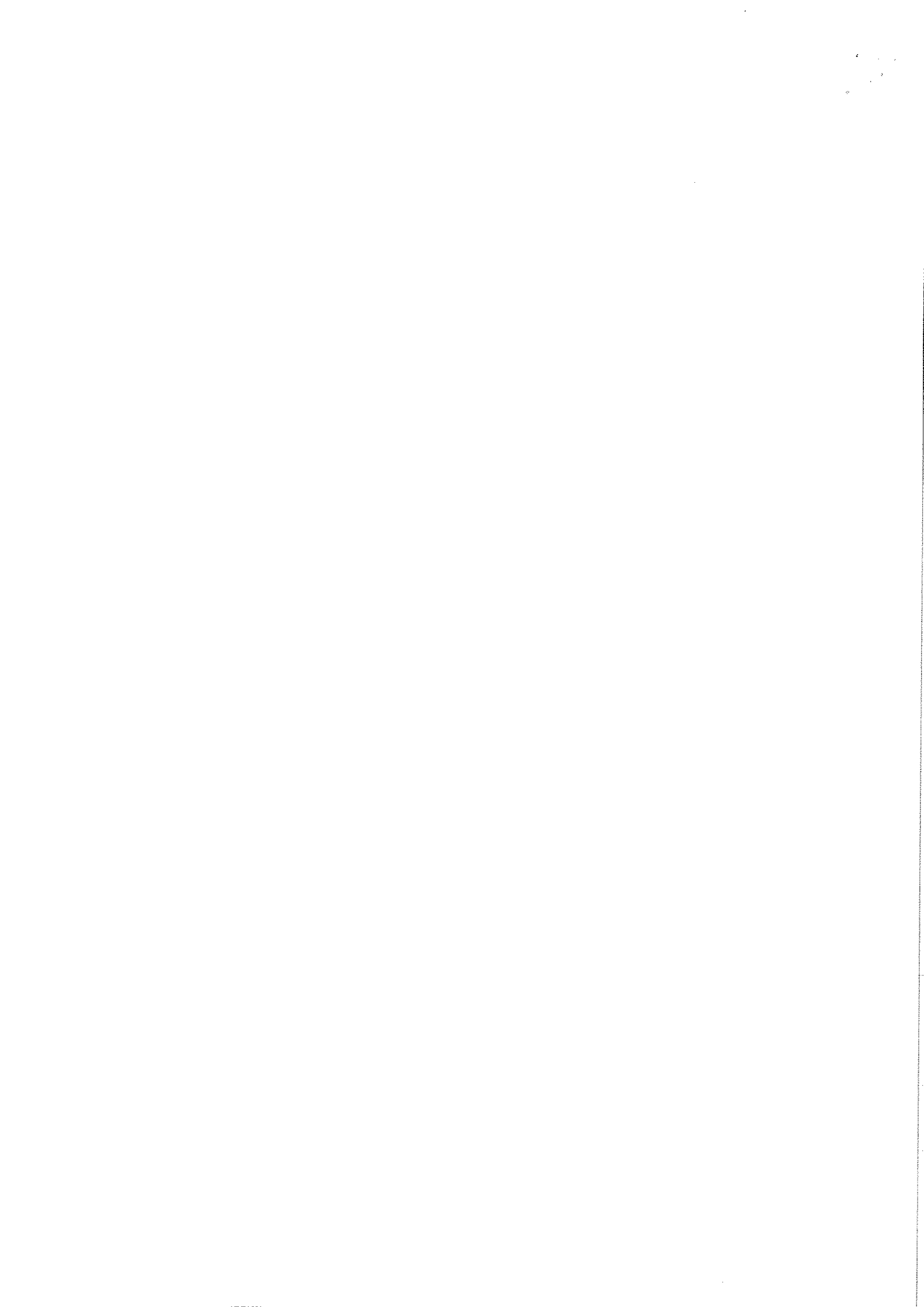


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PEG

The position of the PEG tube in the stomach is secured by an inner holding plate, which must not be too tightly attached to the stomach wall, as otherwise pressure lesions may occur. From the outside, a holding plate is attached, which fixes the PEG tube in the correct position above the exit point on the abdominal wall. The care and disinfection of the outlet site is particularly important for the prophylaxis of infections and skin lesions. After the PEG tube has been attached, the change of dressing is necessary daily for about one week. Thereafter, a change from 1 to 2 times a week is sufficient, provided the injection site is free of irritation. The change of dressings is performed according to the principles of asepsis. If inflammatory signs occur, these should be treated according to a doctor's prescription. If, however, the wound conditions are completely unattractive, there are no restrictions on the use of percutaneous tubes in personal care, and also showering or bathing is allowed two weeks after new plant. The dressing should be removed beforehand and re-applied after personal care.

It's important





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Registration No.:

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Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1104

Time: 2 Hours

Course Name: Nutrition & Elimination I

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Loss of appetite is known as:

- | | |
|------------|-------------|
| a) Apnea | b) Anorexia |
| c) Atresia | d) Anorexic |

Q.2. Full form of PEG tube:

- | | |
|----------------------------------------|------------------------------------|
| a) Protein energy gas | b) Percutaneous enderic gas |
| c) Percutaneous endoscopic gastrostomy | d) Percutaneous endoscopic gastric |

Q.3. What is the physical cause of loss of appetite?

- | | |
|---------------------|-------------------|
| a) Fever | b) Conflict worry |
| c) Emotional stress | d) Atmosphere |

Q.4. What do you mean by enteral nutrition?

- | | |
|--------------|---------------|
| a) By venous | b) By oral |
| c) By artery | d) By stomach |

Q.5. Normal urine color is:

- | | |
|------------------------------|----------------|
| a) Pale yellow | b) White |
| c) Straw – colored and clear | d) Dark yellow |

Q.6. At the time of insertion of NG tube, the position is given to the patient:

- | | |
|---------------------------|---------------------------|
| a) Supine position | b) Prone position |
| c) Sim's lateral position | d) High fowler's position |

Q.7. Which type of included in balance diet?

- | | |
|----------------|------------------|
| a) Mixed salad | b) Carrots |
| c) Alcohol | d) Apple compote |

Q.8. Which of these food is a good choice when you have diarrhea?

- | | |
|----------------|-----------------|
| a) Bananas | b) Rice |
| c) Plain toast | d) All of above |



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Q.9. Which of these fluids is best to drink to prevent dehydration when you have diarrhea?

- a) Water
- b) Broth
- c) Juice
- d) Both a and b

Q.10. Cystitis is estimated that 1 woman in 3 will suffer with cystitis at least once in her life.

What are the reasons of cystitis?

- a) The fact women have a longer urethra than men means germs are better able to reach the urinary bladder
- b) Pregnancy and childbirth facilities do not access far germs
- c) Sexual intercourse does not affect to become a cystitis
- d) All of above

Section – B

04X04 = 16 Marks

Q.1. Describe the influential factors of nutrition.

Q.2. Weight of a man is 50 kg and height is 125 cm. Calculate his BMI using the formula and indicate the Condition.

Q.3. How to rinse the trans nasal and PEG tube?

Q.4. Difference between the Balance diet and light balance diet.

Section – C

04X06 = 24 Marks

Q.1. Define body fluid deficit. Write down the six causes of inadequate and excessive fluid intake.

Q.2. Define diarrhea. Write down the four general principles and hygienic measures for excretion.

Q.3. Define vomiting. Explain the cerebral and reflexive vomiting.

Q.4. Explain the food pyramid with the help of diagram.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1104

Course Name: Nutrition & Elimination I

Time: 2 Hours

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Loss of appetite is known as:

- a) Apnea
- b) Anorexia
- c) Atresia
- d) Anorexic

Q.2. Full form of PEG tube:

- a) Protein energy gas
- b) Percutaneous enderic gas
- c) Percutaneous endoscopic gastrostomy
- d) Percutaneous endoscopic gastric

Q.3. What is the physical cause of loss of appetite?

- a) Fever
- b) Conflict worry
- c) Emotional stress
- d) Atmosphere

Q.4. What do you mean by enteral nutrition?

- a) By venous
- b) By oral
- c) By artery
- d) By stomach

Q.5. Normal urine color is:

- a) Pale yellow
- b) White
- c) Straw – colored and clear
- d) Dark yellow

Q.6. At the time of insertion of NG tube, the position is given to the patient:

- a) Supine position
- b) Prone position
- c) Sim's lateral position
- d) High fowler's position

Q.7. Which type of included in balance diet?

- a) Mixed salad
- b) Carrots
- c) Alcohol
- d) Apple compote

Q.8. Which of these food is a good choice when you have diarrhea?

- a) Bananas
- b) Rice
- c) Plain toast
- d) All of above



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Q.9. Which of these fluids is best to drink to prevent dehydration when you have diarrhea?

- a) Water
b) Broth
c) Juice
d) Both a and b

Q.10. Cystitis is estimated that 1 woman in 3 will suffer with cystitis at least once in her life.

What are the reasons of cystitis?

- a) The fact women have a longer urethra than men means germs are better able to reach the urinary bladder
b) Pregnancy and childbirth facilities do not access far germs
c) Sexual intercourse do not affect to become a cystitis
d) All of above

Section – B

04X04 = 16 Marks

Q.1. Describe the influential factors of nutrition.

Biological factors	<ul style="list-style-type: none">• Age• Physical state, e.g. pain, appetite or feeling of hunger• Functional efficiency of the digestive System• Physical activity and personal basal metabolic rate• Senses of smell and taste• Eyesight Diseases or disabilities
Psychological factors	<ul style="list-style-type: none">• State and mood at the time in question• Personal habits, preferences and dislikes• Visual appeal of food• Mental and intellectual capabilities• Fears, e.g. the food could be poisoned
Environmental factors	<ul style="list-style-type: none">• Tidiness or arrangement in the room and on the table• Location where food is being eaten, e.g. at a table or in bed• Range and variety of food• Quality of the food and drinking water• Decoration of the table

Q.2. Weight of a man is 50 kg and height is 125 cm. Calculate his BMI using the formula and indicate the Condition.

$$\text{BMI} = \frac{\text{weight in kg}}{(\text{height in m})^2}$$

$$\text{BMI} = 50/1.56=32.05$$

The condition is obesity



Q.3. How to rinse the trans nasal and PEG tube?

Rinse the Tubes (trans nasal and PEG)

In order to avoid clogging and thus the continuity of the tube, it must be flushed regularly. Obstructions can occur if food residues remain too long in the tube or if the tube food comes into contact with medication. Therefore, the tube is rinsed:

- before and after each food supply
- after aspiration of stomach contents
- before, between and after each drug application
- with a longer interruption of the tube nutrition at least once a day

20-30 ml of liquid is used to rinse the tube. Water is suitable for this purpose. Under no circumstances may acidic fluids such as rose hip and other fruit teas or fruit juices be used. The acid contained in these fluids causes a flocculation of the protein in the tube food and thus a tube clogging.

Q.4 Difference between the Balance diet and light balance diet.

Light balanced diet (bland diet)

A light balanced diet is designed to help take the strain off individual digestive organs or the entire metabolism. The difference between a light balanced diet and a standard balanced diet lies in the selection and preparation of foods. The light balanced diet must be must contain sufficient quantities of all nutrients. In order to relieve strain on the digestive organs and the metabolism example

Balance Diet	Light balanced diet
Mixed salad	Salad of green Leaves
Breaded escalope stuffed with ham and cheese	Poached Chicken Escalope
Fried Potatoes	Steamed potatoes
Paperonata (Peppers, tomatoes and onions)	carrots
Chocolate mousse	Apple compote

Section – C

04X06 = 24 Marks

Q.1. Define body fluid deficit. Write down the six causes of inadequate and excessive fluid intake.

Body fluid deficit

A good fluid balance is therefore important for the metabolism, as well as for the functioning of all cells, tissues and organ systems. A body fluid deficit arises when there is a lack of balance between the intake and the excretion of fluid. The term "exsiccosis" is also used as dehydration. The human body loses a considerable amount of water each day. This is excreted by the kidneys in the form of urine, by the lungs in the form of water vapour, by the skin in the form of sweat and by the intestine. Constant compensation for this loss of water is required. As a general rule, we take in water by drinking and by eating foods which have a high water content. Our drinking volume depends on our age, our state of health, our



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physical activity and us environment. The guidelines for an adequate drinking volume are as follows:

- Children: approx. 1 – 1.5 liters per day
- Adults: approx. 1.5 – 2 liters per day

Lost fluid should always be replaced as quickly as possible.

Reasons/causes for an inadequate fluid intake:

- Change in the sense of thirst, e.g. in old age
- Swallowing difficulties
- Drinks are out of reach or do not taste good
- Not able to express thirst
- Patient forgets to drink
- Patient does not want to go to the toilet so often, so does not drink much

Reasons/causes for excessive fluid excretion:

- Physical exertion (work, sport) and heavy sweating
- Fever
- Diarrhea and vomiting
- Hyperglycemia
- High blood loss
- Burns, including sun burn
- Taking diuretics

Q.2. Define diarrhea. Write down the four general principles and hygienic measures for excretion.

Diarrhea

Frequent evacuation involving several watery stools per day. If this situation lasts for more than 1 month, it would be described as chronic diarrhea. Diarrhea is a symptom rather than an actual disease.

Consequences for nursing

General principles

Excretion is a highly personal and intimate activity. The intimate sphere is an individual 's most private and personal area. The areas within a person 's intimate sphere are largely determined by culture and upbringing. In view of this, it is important to note the following basic measures:

- Ensure the patient cannot be seen by others. This means only folding back the bed sheet as far as necessary and warning the person you are going to do this.
- Make the patient wear a dressing gown or something similar when they are out of bed as hospital gowns are open at the back.
- Draw the curtain around the bed and/or use a screen if you need to fold back the bed sheet or duvet.
- When performing nursing duties, ask visitors and possibly other patients to leave the room.



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- Do not chivy the patient along during the excretion process, including by means of looks or gestures. This kind of behaviour is a subtle form of force.
- Place the bell within easy reach and leave the room if possible.
- Some patients have individual habits when on the toilet such as reading a newspaper or book and these should be respected.
- Think about the words you use: adults wear incontinence protection or pads rather than 'nappies' or 'Pampers'
- Ventilate the room following excretion.

Hygienic measures

- Hand hygiene is the most important preventive measure against infection when performing any nursing measures. Particularly when dealing with excretion, you will be exposed to a high risk of infection. It should also be remembered that many microorganisms are passed on via hand contact. Wear gloves when dealing with any excretory products. Hygienic hand disinfection is also required after removing gloves.
- Hand hygiene is important for patients as well as for you. Make sure patients confined to bed are able to wash their hands after every excretion. The external genitalia should be cleaned after every excretion. The patient should be able to do this themselves where possible.
- Make sure the surface of the seat (toilet seat, night commode) is cleaned and disinfected.
- If excretion must be performed in bed, bedpans and urine bottles removed from the bed must not be placed on the floor. It is better to have a wheelchair handy for this purpose or the flap of a bedside table.
- In hospitals or nursing homes, excretory products are disposed of using so-called potting machines. The excretion vessel is cleaned and disinfected in this machine.
- These machines are not available in a domestic nursing setting. Urine bottles are emptied into the toilet and then rinsed out with hot water. The contents of bed pans or pots from night commodes are also emptied into the toilet. Containers are cleaned with a commercially available toilet cleaner. Detergents may also be used if none is available. If using a detergent, the containers first need to be soaked in the alkaline solution for a short while. The toilet brush is then used to clean the bedpans/commode bowls. Always wear latex gloves for this kind of work.

Q.3. Define vomiting. Explain the cerebral and reflexive vomiting.

Nausea/vomiting

Vomiting is not a disease but it's Symptom of a disease. Vomiting is triggered by a part of the brain known as the vomiting centre. Vomiting means forcibly expulsion of stomach contents. Sensation of vomiting is known as Nausea.

Cerebral vomiting

the vomiting centre in the brain is activated directly.



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- Brain diseases, e.g. brain tumour, meningitis, migraine, concussion
- Substances which have a toxic effect on the brain, e.g. drugs (anaesthetics, chemotherapy, analgesics) or alcohol. It can also be a side effect of the drug.

Reflexive vomiting

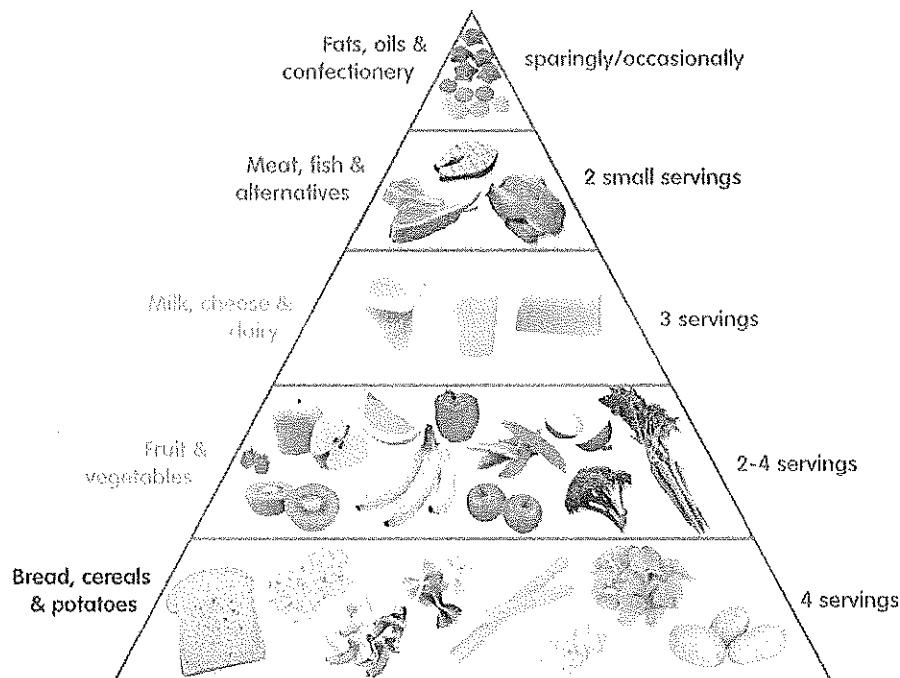
the vomiting centre is activated indirectly via the autonomic nervous system.

- Diseases of the gastrointestinal tract
- Heart attack (a common heart attack symptom in women)
- Irritation of the mucous membrane of the throat with an object (toothbrush) or finger
- Rotary vertigo or travel sickness
- Hormone changes during pregnancy
- Over-extension of the stomach by overeating or eating too quickly
- Infectious diseases, Anxiety
- Intolerance of food

Q.4. Explain the food pyramid with the help of diagram.

The food pyramid

The food pyramid shows which foods we should eat daily in which quantities and thus provides a basis for a healthy diet.





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Foods which mainly supply the same nutrients are grouped together into each level of the pyramid. The foods within the different levels of the pyramid should be changed daily.

Drinks	<p>Mineral water, herbal tea, green tea, diluted fruit juice, tap water</p> <p>The human body is made up of 50—70% of water. Water in the body is essential in order to proper function of life process. Water is a transport substance and solvent, regulates body temperature and is a support substance for cells. We should consume 1—2 litre each day. This requirement is increased in cases of physical activity, high temperatures, fever, infection and diarrhoea. Children also have higher require- ments.</p>
Fruit and vegeta- bles	<p>Cucumber, onions, red cabbage, broccoli, apples, pineapple, pears</p> <p>Fruit and vegetables provide many vitamins, minerals. We should consume five por- tions per day from this food group. 1 Portion = 120 g or one handful. Each day, one portion can be replaced by a fruit or vegetable juice.</p>
Grain products, pulses and pota- toes	<p>Bread, maize, pasta, rice, millet, barley, potatoes, soya, chickpeas</p> <p>Grains, pulses and potatoes contain high levels of starch. They mainly supply the body with energy. Wholegrain products are also rich in vitamins, minerals and bioac- tive compounds. We should eat a portion from this group at every main meal. 1 por- tion = approx. 100 g of bread or 200—300g of potatoes or 70g of pasta or cereal.</p>
Milk and dairy prod- ucts	<p>Yoghurt, soft cheese, milky drinks, hard cheese, soured milk</p> <p>Milk and dairy products provide us with protein and the mineral calcium. We should consume around three portions per day. 1 portion = 200 ml of milk or 180g of yoghurt or 200g of cottage cheese or 40 g of cheese. Caution: the fat content of dairy prod- ucts varies.</p>
Meat, fish, eggs, cheese and sources of vegetable pro- tein	<p>trout, meat, fried egg, seafood</p> <p>Foods from this group mainly supply the human body with protein. Meat also provides the body with the mineral iron and B-group vitamins. Oil fish in particular contain fish oil, which has a beneficial effect on the level of cholesterol in the blood. We need approximately one portion per day and It is important to vary our sources of protein.</p> <p>1 portion= 100gofmeator2—3eggs or 200g of Quorn or 120g of Tofu.</p>
Oils and fats and nuts	<p>Olive oil milk fat, sunflower seeds, rapeseed oil, avocado, butter</p> <p>Oils and fats firstly provide us primarily with energy. Vegetable oils and fish oil also contain important vitamins and valuable Omega 3 fatty acids, which have a beneficial effect on our health. Oils in fried dishes and animal fats are not recommended to the same extent. Each day, we should consume 2—3 teaspoons of olive or rapeseed oil for salads, 2—3 teaspoons of vegetable oil for heating up food, approximately 2 tea- spoons of spreadable fat (e.g. butter).</p>



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Confectionery, salted snacks and high-energy drinks	Chocolate, salted peanuts, energy drinks, alcohol, ice cream, sugar lumps, cola, ras-gulla other Indian sweets. Foodstuffs from this level of the pyramid mainly provide us with a lot of energy, but no valuable nutrients. We should therefore enjoy these foods in moderation. It is important to ensure that the portion sizes of these foods and drinks are kept small and that we do not get into the habit of satisfying our hunger with foods from this group.
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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: ^{3HP}1105

Set-A

Time: 2 Hours

Course Name: Clinical Picture I

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Commonest causative organism for urinary tract infection is:

- | | |
|---------------------|-----------------|
| a) Proteus | b) Streptococci |
| c) Escherichia Coli | d) Pseudomonas |

Q.2. Cystitis is the inflammation of:

- | | |
|-----------------|--------------------|
| a) Gall bladder | b) Urinary bladder |
| c) Cyst | d) Liver |

Q.3. What is the symptom of dry skin?

- | | |
|----------------|----------------------------|
| a) Oily skin | b) Enough drinking |
| c) Dehydration | d) Good smooth of the skin |

Q.4. May cause infection in the oral cavity (thrush in infant):

- | | |
|----------------|--------------|
| a) UTI | b) Candida |
| c) Tinea Pedis | d) Psoriasis |

Q.5. What plays a major role in psoriasis?

- | | |
|-------------------------|---------------------------|
| a) The digestive system | b) The circulatory system |
| c) The immune system | d) The nervous system |

Q.6. Pollen is which type of allergy?

- | | |
|---------------------|--------------------|
| a) Food allergy | b) Inhaled allergy |
| c) Injected allergy | d) Contact allergy |

Q.7. How much fluid needs during constipation?

- | | |
|----------------|----------------|
| a) 1500 ml/day | b) 1000 ml/day |
| c) 3000 ml/day | d) 500 ml/day |

Q.8. Droplet infection transmitted by:

- | | |
|--------------------------|-------------------|
| a) By blood transfusion | b) Direct contact |
| c) Sneezing and coughing | d) All of above |



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Q.9. BMI of 33 indicates which status?

- a) Normal
- b) Under weight
- c) Over weight
- d) Obesity

Q.10. Which is a common UTI risk factor in adult?

- a) Urinary catheter
- b) Condom catheter
- c) Continues hold the urine
- d) All of above

Section – B

04X04 = 16 Marks

Q.1. Define infection. Difference between the endogenous and exogenous.

Q.2. Define UTI. Write down the Six prevention of UTI.

Q.3. Describe the four symptom of candida's.

Q.4. Write down the eight causes of Dysphagia.

Section – C

04X06 = 24 Marks

Q.1. Explain obesity.

Q.2. What do you mean underweight? Write down the four causes and treatment of underweight.

Q.3. Difference between the immediate and contact type of allergy.

Q.4. Define diarrhea. Explain the treatment and prophylaxis of diarrhea.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: 1105

Course Name: Clinical Picture I

Time: 2 Hours

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Commonest causative organism for urinary tract infection is:

- | | |
|---------------------|-----------------|
| a) Proteus | b) Streptococci |
| c) Escherichia Coli | d) Pseudomonas |

Q.2. Cystitis is the inflammation of:

- | | |
|-----------------|--------------------|
| a) Gall bladder | b) Urinary bladder |
| c) Cyst | d) Liver |

Q.3. What is the symptom of dry skin?

- | | |
|----------------|----------------------------|
| a) Oily skin | b) Enough drinking |
| c) Dehydration | d) Good smooth of the skin |

Q.4. May cause infection in the oral cavity (thrush in infant):

- | | |
|----------------|--------------|
| a) UTI | b) Candida |
| c) Tinea Pedis | d) Psoriasis |

Q.5. What plays a major role in psoriasis?

- | | |
|-------------------------|---------------------------|
| a) The digestive system | b) The circulatory system |
| c) The immune system | d) The nervous system |

Q.6. Pollen is which type of allergy?

- | | |
|---------------------|--------------------|
| a) Food allergy | b) Inhaled allergy |
| c) Injected allergy | d) Contact allergy |

Q.7. How much fluid needs during constipation?

- | | |
|----------------|----------------|
| a) 1500 ml/day | b) 1000 ml/day |
| c) 3000 ml/day | d) 500 ml/day |

Q.8. Droplet infection transmitted by:

- | | |
|--------------------------|-------------------|
| a) By blood transfusion | b) Direct contact |
| c) Sneezing and coughing | d) All of above |



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Q.9. BMI of 33 indicates which status?

- a) Normal
- b) Under weight
- c) Over weight
- d) Obesity

Q.10. Which is a common UTI risk factor in adult?

- a) Urinary catheter
- b) Condom catheter
- c) Continues hold the urine
- d) All of above

Section – B

04X04 = 16 Marks

Q.1. Define infection. Difference between the endogenous and exogenous.

Infection is the invasion of an organism's body tissues by disease-causing agents, their multiplication, and the reaction of host tissues to the infectious agents and the toxins they produce. Infectious disease, also known as transmissible disease or communicable disease, is illness resulting from an infection. These include skin contact, bodily fluids, contact with faeces, airborne particles, and touching an object that an infected person has also touched. The immune system is an effective barrier against infectious agents.

Source of Infection

Endogenous	Exogenous
<ul style="list-style-type: none">• patient own flora may invade patients tissue during some surgical operations	<ul style="list-style-type: none">• From another patient, staff member and environment in the hospital• Environment source: air, water and food

Q.2. Define UTI. Write down the Six prevention of UTI.

Urinary Tract Infection

A urinary tract infection (UTI) is an infection that affects part of the urinary tract.[1] When it affects the lower urinary tract it is known as a bladder infection (cystitis) and when it affects the upper urinary tract it is known as kidney infection (pyelonephritis).

Prevention of UTI

- Maintain proper personal hygiene.
- Maintain hygiene methods use after urinating and defecation.
- Never hold the urine.
- Frequent don't use of spermicide or diaphragm as a method of contraceptive.
- Using the urinary catheters as little and short of time as possible and used sterile method for insertion.
- Appropriate care of urinary catheter.



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Q.3. Describe the four symptom of candida's.

Symptoms

Oral thrush	whitish deposits, most of which can be wiped away, on reddened mucosa, possibly bleeding or ulcerated mucosa, pain during eating or swallowing
Oesophageal thrush	pain during swallowing
Vaginal thrush	reddened and swollen vaginal mucosa, whitish deposits that can be wiped away, considerable itchiness, burning, lots of whitish crumbly discharge from the Vagina
Thrush affecting the urethra or bladder	symptoms like those associated with cystitis, namely a burning during urination, itchiness, more frequent desire to urinate
Thrush affecting the respiratory tracts	coughing, sputum

Q.4. Write down the eight causes of Dysphagia.

Causes

Chewing and swallowing difficulties can be caused by the following:

- Inflammatory changes, Fungal infection of the oral mucous membrane
- Age-related changes, such as the loss of teeth or poorly fitting dentures
- Parkinson 's disease, Stroke
- Multiple sclerosis
- Coughing, clearing the throat, sneezing before, during or after eating or drinking
- Change to the voice, e.g. raspy, hoarse or husky voice
- Solid or liquid nutrition or saliva escaping from the mouth
- Collection of bits of food in the mouth and cheek pouches
- Gurgling noises when swallowing
- Very slow eating
- Comments about pain in the throat or chest when swallowing
- Unintentional weight loss
- Dehydration, Food refusal
- Raised or fluctuating body temperature
- Pneumonia where the cause is unclear

Section – C

04X06 = 24 Marks

Q.1. Explain obesity.

Obesity

Obesity is a state of excess adipose tissue mass.

Causes of Obesity

- excessive food intake,
- having a sedentary (inactive) lifestyle
- not sleeping enough, which can lead to hormonal changes that make you feel hungrier and crave certain high-calorie foods
- genetics, which can affect how your body processes food into energy and how fat is stored



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- growing older, which can lead to less muscle mass and a slower metabolic rate, making it easier to gain weight
- pregnancy (weight gained during pregnancy can be difficult to lose and may eventually lead to obesity)

Prevention

- Social changes and personal choices
- Diet:
 - the primary focus of diet therapy is to reduce overall calorie
 - low carbohydrate, high protein diets appear to be more effective in lowering BMI
- Increase physical activity
- Behavior modification:
 - Self-monitoring of weight
 - Stress management
 - Social support
- Exercise

Q.2. What do you mean underweight? Write down the four causes and treatment of underweight.

Underweight

An underweight person is a person whose body weight is considered too low to be healthy. Underweight people have a body mass index (BMI) of under 18.5 or a weight 15% to 20% below that normal for their age and height group.

Causes

- Family history
- A high metabolism
- Physical illness or chronic disease
- Mental illness
- Osteoporosis
- Feeling tired all the time
- Anemia
- Irregular periods
- Premature births
- Slow or impaired growth

Treatment

Adding snacks	High-protein and whole-grain carbohydrate snacks can help a person gain weight. Examples include peanut butter crackers, protein bars, trail mix, pita chips and hummus, or a handful of almonds.
Eating several small meals, a day	Sometimes a person may be underweight because they cannot tolerate eating large meals. Instead, a person can eat several small meals throughout the day.
Incorporating additional foods	A person can add calorie-dense food sources to their existing diet, such as putting slivered almonds on top of cereal or yogurt, sunflower or chia seeds on a salad or soup, or nut butter on whole-grain toast.
Avoiding empty calories	Eating high-calorie foods may cause a person to gain weight, but they also have excess fats that could affect a person's heart and blood vessels. A person should avoid foods that are high in sugar and salt.



Q.3. Difference between the immediate and contact type of allergy.

Immediate-type allergy

- With the immediate-type allergy, the immune system response occurs within seconds or minutes of contact with the allergen.

Examples of immediate-type allergies

- respiratory organs: grass or tree pollen (hay fever), fungal spores, flour, house dust mites or animal hair (pet allergy)
- digestive tract: food such as proteins, fruit, vegetables, meat, fish
- reaction to drugs, mainly antibiotics, analgesics
- insect bites, bee or wasp venom

Symptoms associated with immediate-type allergies

- Facial swelling (oedema of the eyelids)
- Obstruction of the respiratory tracts (asthma, shortness of breath)
- Stomach cramps
- Nausea
- Runny nose and skin rashes (severe itchiness, burning sensations)
- Fall in blood pressure.

Delayed-type allergy or contact allergy

- Here, reactions occur hours or days after contact with allergens. Contact allergens are generally substances that come into contact with the skin, e.g. nickel (jewelry or coins), scents, preservatives in cosmetics, or depilatory agents.

Symptoms associated with delayed-type or contact Allergies

- Burning,
- Itchiness,
- Redness,
- Inflammation (eczema)

Q.4. Define diarrhea. Explain the treatment and prophylaxis of diarrhea.

Diarrhoea

Frequent evacuation involving several watery stools per day. If this situation lasts for more than 1 month, it would be described as chronic diarrhea. Diarrhea is a symptom rather than an actual disease.

Treatment

The main emphasis is on replacing fluids and electrolytes. this can be done orally or via an infusion. The oral approach uses options like unsweetened chamomile or fennel tea, broth or highly diluted fruit juices. Sweet drinks are not advisable. It is also best to avoid coffee and alcohol. Pharmacies stock ready-to-use sachets of mineral salts to compensate for any loss of salts. Special formulations are available for infants and young children. Solid food is avoided when starting treatment.



Prophylaxis

The following rules are important from a prophylaxis perspective:

- Regular hand washing, particularly after using the toilet, before cooking, before eating or after nappy changing.
- Correct (hygienic) handling of food such as washing hands before any preparation, sticking to use-by dates, keeping perishable products cold, washing fruit and vegetables before eating.

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School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1105

Set B

Time: 2 Hours

Course Name: Clinical Picture I

Max. Marks: 50

Instruction:

1. SECTION-A: Answer all questions from section A. Each question carries 01 mark
2. SECTION-B: Answer all questions from section B. Each question carries 04 marks
3. SECTION-C: Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Factors influencing the nosocomial infection are:

- a) Patient susceptibility
- b) Microbial agent
- c) Environment factors
- d) All of above

Q.2. Which type of sources of infection in a hospital environment:

- a) Endogenous
- b) Exogenous
- c) Endotoxin
- d) Both a and b

Q.3. Hospital acquired infection is also known as:

- a) Nasocomial infection
- b) Nostocomial infection
- c) Nosocongenial infection
- d) Nosocomial infection

Q.4. Which medication used for mycoses?

- a) Antimycotics
- b) Antiemetic's
- c) Antipyretics
- d) All of above

Q.5. What plays a major role in psoriasis?

- a) The digestive system
- b) The circulatory system
- c) The immune system
- d) The nervous system

Q.6. Latex is which type of allergy?

- a) Food allergy
- b) Inhaled allergy
- c) Injected allergy
- d) Contact allergy

Q.7. How much fluid needs during constipation?

- a) 1500 ml/day
- b) 1000 ml/day
- c) 3000 ml/day
- d) 500 ml/day

Q.8. What is cause of constipation?

- a) Milk
- b) Excessive physical activity
- c) Papaya
- d) Excessive water intake



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Q.9. BMI of under 18.5 indicates which status?

- a) Normal
- b) Under weight
- c) Over weight
- d) Obesity

Q.10. What is the symptom of contact allergies?

- a) Burning
- b) Nausea
- c) Stomach cramp
- d) Fall blood pressure

Section – B

04X04 = 16 Marks

Q.1. Define HAI. How to prevention of nosocomial infection?

Q.2. Define UTI. Write down the four causes and symptom of UTI.

Q.3. Write down the eight causes of psoriasis.

Q.4. What do you understand dry skin? Write down the eight prevention of dry skin.

Section – C

04X06 = 24 Marks

Q.1. What do you understand fungal disease? Describe the treatment of candida's.

Q.2. Define allergies. Elaborate the cause of allergies.

Q.3. Define eating disorder. Difference between the anorexia and bulimia nervosa.

Q.4. Define dysphagia. Explain the nursing measures of dysphagia.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: 1405-SHP1105

Course Name: Clinical Picture I

Answer Key

Time: 2 Hours

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Factors influencing the nosocomial infection are:

- | | |
|---------------------------|--------------------|
| a) Patient susceptibility | b) Microbial agent |
| c) Environment factors | d) All of above |

Q.2. Which type of sources of infection in a hospital environment:

- | | |
|---------------|-----------------|
| a) Endogenous | b) Exogenous |
| c) Endotoxin | d) Both a and b |

Q.3. Hospital acquired infection is also known as:

- | | |
|-----------------------------|--------------------------|
| a) Nosocomial infection | b) Nostocomial infection |
| c) Nosocongential infection | d) Nosocomial infection |

Q.4. Which medication used for mycoses?

- | | |
|-----------------|-----------------|
| a) Antimycotics | b) Antiemetic's |
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- a) Burning
b) Nausea
c) Stomach cramp
d) Fall blood pressure

Section – B

04X04 = 16 Marks

Q.1. Define HAI. How to prevention of nosocomial infection?

Nosocomial Infection

A hospital-acquired infection (HAI), also known as a nosocomial infection, is an infection that is acquired in a hospital or other health care facility. To emphasize both hospital and nonhospital settings, it is sometimes instead called a health care-associated infection.

Prevention of Nosocomial Infection

- Source patient to destroy the pathogenic agents
- Proper sterilization & disinfection of inanimate object. This helps to control the source of infection.
- Transmission can be controlled by regular washing of hands
- Disinfection of equipment & change of working cloths
- Use of sterile dressing, surgical gloves & face mask further contributes in control of nosocomial infection
- Pre-operative disinfection of patient

Q.2. Define UTI. Write down the four causes and symptom of UTI.

Urinary Tract Infection

A urinary tract infection (UTI) is an infection that affects part of the urinary tract.[1] When it affects the lower urinary tract it is known as a bladder infection (cystitis) and when it affects the upper urinary tract it is known as kidney infection (pyelonephritis).

Causes

- Urinary catheters
- Bacteria: Escherichia coli, klebsiella.

Symptoms of UTI

- Burning with urination
- Increased urgency of urination
- Bloody urine
- Urine that looks like cola or tea
- Urine that has a strong odor
- Pelvic pain in women
- Rectal pain in men
- Fever
- Chills



Q.3. Write down the eight causes of psoriasis.

Causes

The immune System of those with psoriasis, attacks the keratinocytes (cells in the outer skin). The skin responds with an inflammatory reaction. This causes the skin to thicken. Even now, the reasons why psoriasis occurs have still to be fully explained. There would appear to be some kind of genetic predisposition, although the disease only tends to break out when various factors coincide. These can be:

- Emotional stress
- Excess weight
- Infectious diseases (e.g. tonsillitis, viral infections)
- Medication (e.g. lithium, beta blockers, ACE inhibitors, malaria drugs)
- Metabolic disorders (e.g. diabetes)
- Excessive consumption of alcohol and nicotine
- Hormonal factors (e.g. pregnancy, menarche, menopause)
- External injuries (e.g. prolonged friction, sunburn)
- Climatic influences (e.g. cold, damp weather)
- Certain foods (varies greatly between individuals, each psoriatic must find out for themselves which foods can trigger an episode)

First outbreak of psoriasis often as early as childhood or adolescence or only from age 40 onwards

Q.4. What do you understand dry skin? Write down the eight prevention of dry skin.

Dry Skin

Dry skin is an uncomfortable condition marked by scaling, itching, and cracking. It can occur for a variety of reasons Dry skin can affect any part of your body. It commonly affects hands, arms, and legs. In many cases, lifestyle changes.

Prevention of Dry Skin

- void using hot water to bathe or shower
- shower every other day instead of every day
- keep your shower time to less than 10 minutes
- use a moisturizing soap when you bathe or shower
- apply moisturizer immediately after bathing or showering
- pat, rather than rub, wet skin dry with a soft towel
- avoid itching or scrubbing dry skin patches
- use a humidifier in your home
- drink plenty of water



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Section – C

04X06 = 24 Marks

Q.1. What do you understand fungal disease? Describe the treatment of candida's.

Fungal Diseases

Mycoses are diseases caused by fungi. There are hundreds of thousands of types of fungi, of which 60 are harmful to humans. People with a weakened immune System are particularly susceptible to fungal diseases (e.g. during chemotherapy, when being treated with cortisone, when malnourished, when suffering from AIDS).

Treatment

Antimycotics are used for mycoses. These contain different ingredients, depending the pathogen. Therefore, it is important to identify carefully the fungus involved in a case of mycosis. Antimycotics can be administered Locally, orally or intravenously.

Note!

When dealing with patients suffering from candidiasis, it is particularly important to remember the following:

- Wash those parts of the body affected by Candida last and carefully dispose of any washing utensils after washing.
- Carry out thorough prophylactic measures to prevent thrush (daily mouth inspection, regular oral hygiene to remove any food residue, keep oral mucosa moist, stimulate saliva, mouthwash after using asthma sprays containing cortisone).

Q.2. Define allergies. Elaborate the cause of allergies.

Allergies

So far, the various forms of medication have mainly been used to treat plaques. Medication was applied locally (directly to the skin: ointments, creams or Lotions) for mild cases or systemically (ingested) for more severe cases. Meticulous skin care should form part of any psoriasis treatment

Causes / Risk Factors

Inhaled allergens	these are inhaled with the air we breathe (e.g. house dust, pollen, particular matter).
Contact allergens	these involve contact (e.g. latex), are worn next to the skin (e.g. nickel) or are applied to the skin (e.g. cosmetics).
Food allergens	these are eaten or drunk (e.g. nuts, strawberries, milk).
Injected allergens	allergens introduced to the circulation (e.g. wasp stings, blood of a different group, medicines).

Q.3. Define eating disorder. Difference between the anorexia and bulimia nervosa.

Eating Disorders: Anorexia nervosa and Bulimia nervosa

Below we describe the two main eating disorders, anorexia nervosa and bulimia nervosa.

Anorexia nervosa	Anorexia Nervosa is a life threatening, psychological eating disorders. It's mean lack of appetite, sometime patient does complete refusal of food and extreme weight loss.
Bulimia nervosa	Bulimia means "hunger of an ox" and characterised by episode of eating of large amount of food, alternating with vomiting.



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Symptoms

The symptoms of both eating disorders are as following.

Anorexia nervosa	Bulimia nervosa
<ul style="list-style-type: none">• Strong compulsion to exercise• Hypersensitivity to cold• Reduced productivity, Chronic fatigue• Problems concentrating• Depression with risk of suicide	<ul style="list-style-type: none">• Feelings of shame and guilt because of the binge eating• Body weight fluctuates more than of anorexia nervosa and is usually significantly higher• Reduced productivity, Chronic fatigue• Problems concentrating• Changes to the teeth are typical due to the frequent vomiting• Episodes of weakness• Gastrointestinal disorders• Cardiac irregularities• Depression with risk of suicide

Q.4. Define dysphagia. Explain the nursing measures of dysphagia.

Chewing and Swallowing Difficulties

Dysphagia is difficulty in swallowing when eating.

Nursing measures for chewing and swallowing difficulties!

Guidelines for administering food to people with swallowing difficulties are generally set out in a nursing standard in the institution. Another person should always be present when people with swallowing difficulties are eating and drinking. This person should ensure that:

- Foods are offered which are soft but still encourage chewing.
- Small, frequent meals offered, people with swallowing difficulties tire easily when eating.
- Drinks are always offered at mealtimes too, should not be given until the end of the meal.
- The dishes should not be overly browned or spiced, foods of this kind irritate the mucous membranes and can lead to coughing and choking.
- No unsuitable dishes are offered, such as
 - Dry, crumbly foods, e.g. biscuits, rusks
 - Glutinous foods, e.g. fresh bread
 - Foods with stringy fibres, e.g. green beans, rhubarb, celery
 - Foods which involve different consistencies, e.g. soup with croutons

The answer is



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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1106

Set-A

Time: 2 Hours

Course Name: First Aid, CPR and Palliative Care

Max. Marks: 50

Instruction:

1. SECTION-A: Answer all questions from section A. Each question carries 01 mark
2. SECTION-B: Answer all questions from section B. Each question carries 04 marks
3. SECTION-C: Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Which of the following disease is produced by dog bite?

- | | |
|--------------|-----------------|
| a) Influenza | b) Yellow fever |
| c) Herpes | d) Rabies |

Q.2. How long would you check to see if an unconscious casualty is breathing normally?

- | | |
|----------------------------|-----------------------------|
| a) No more than 10 seconds | b) Approximately 10 seconds |
| c) Exactly 10 seconds | d) At least 10 seconds |

Q.3. While doing CPR the compression ventilation ratio in an adult should be?

- | | |
|---------|---------|
| a) 15:2 | b) 20:2 |
| c) 15:1 | d) 30:2 |

Q.4. What do you mean "Aims of First Aid"?

- | | |
|---------------------------------|---------------------|
| a) Preserve life | b) Promote recovery |
| c) Transport nearest healthcare | d) All of above |

Q.5. AVPU scale means is:

- | | |
|-------------------------------------------|---------------------------------|
| a) Alert, Voice, Pain, Unconsciousnes | b) Active, Verbal, Pain, Unique |
| c) Alert, Voluntary, Pain, Unconsciousnes | d) Alert, Voice, Pain, United |

Q.6. Dyspnea is known as:

- | | |
|--------------------------|---------------------------|
| a) Softness of breathing | b) Normal Breathing |
| c) Absence of breathing | d) Shortness of breathing |

Q.7. Compound fracture is known as:

- | | |
|---------------------|-------------------|
| a) Open fracture | b) Close fracture |
| c) Complex fracture | d) All of above |

Q.8. What steps would you take to control bleeding from a nosebleed?

- a) Sit casualty down, lean forward and pinch soft part of nose
- b) Sit casualty down, lean backward and pinch soft part of nose
- c) Lie casualty down and pinch soft part of nose
- d) Lie casualty down and pinch top of nose



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Q.9. What should your first action be when treating an electrical burn?

- a) Ensure that the casualty is still breathing
- b) Wash the burn with cold water
- c) Check for danger and ensure that contact with the electrical source is broken
- d) Check for level of response

Q.10. Dressing and bandages are used to:

- a) Reduce the victim pain
- b) Reduce internal bleeding
- c) Help control bleeding and prevent infection.
- d) Make it easier to take the victim to the hospital.

Section – B

04X04 = 16 Marks

Q.1. Define wound. Difference between the abrasions and contusions.

Q.2. Define fracture. Describe the causes of fracture.

Q.3. Draw the first aid overview flow chart.

Q.4 Define dyspnea. Explain the grades of dyspnea.

Section – C

04X06 = 24 Marks

Q.1. Define burn. Explain the degree of burn.

Q.2. Define first aid. How to observe responsiveness?

Q.3. Define dressing. Difference between the adhesive and non-adhesive dressing.

Q.4. What do you understand transport technique? Describe the single helper transport technique.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1106

Answer key

Time: 2 Hours

Course Name: First Aid, CPR and Palliative Care

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

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- | | |
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- c) Check for danger and ensure that contact with the electrical source is broken**
- d) Check for level of response

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- b) Reduce internal bleeding
- c) Help control bleeding and prevent infection**
- d) Make it easier to take the victim to the hospital.

Section – B

04X04 = 16 Marks

Q.1. Define wound. Difference between the abrasions and contusions.

A wound is an injury in which the skin or another surrounding surface is torn, pierced, cut or otherwise broken. Wounds can be external or internal in the body. Each type of wound carries specific risks associated with the surrounding tissue damage and infection.

Abrasions

These wounds are superficial wounds in which the top most layers of the skin are scraped off, leaving a raw, tender area. These wounds appear often when experiencing a sliding fall (e.g. of a bike). The wounds often contain embedded foreign particles which may result in infections. Abrasions do not bleed much, but are usually very painful.

Contusions (bruises)

Contused wounds are caused by blows, by blunt instruments or by punching. The capillaries are ruptured by the punch and blood leaks into the tissues. Severe contusion might be an indication of a deeper damage, like a fracture or internal injury.

Q.2. Define fracture. Describe the causes of fracture.

Fractures

A fracture is a break/bend or crack in a bone. Generally, a considerable force is needed to break a bone, unless it is diseased or old. The bones that are still growing are supple and may split, bend, or crack.

Causes of fractures

may happen when direct (a blow) or indirect force (a twist, a wrench) is inflicted on a bone.

Direct force

The bone breaks at the spot of application of the force e.g. a severe fall on a projecting stone, a bullet passing into bones, or a wheel passing over the body, etc.



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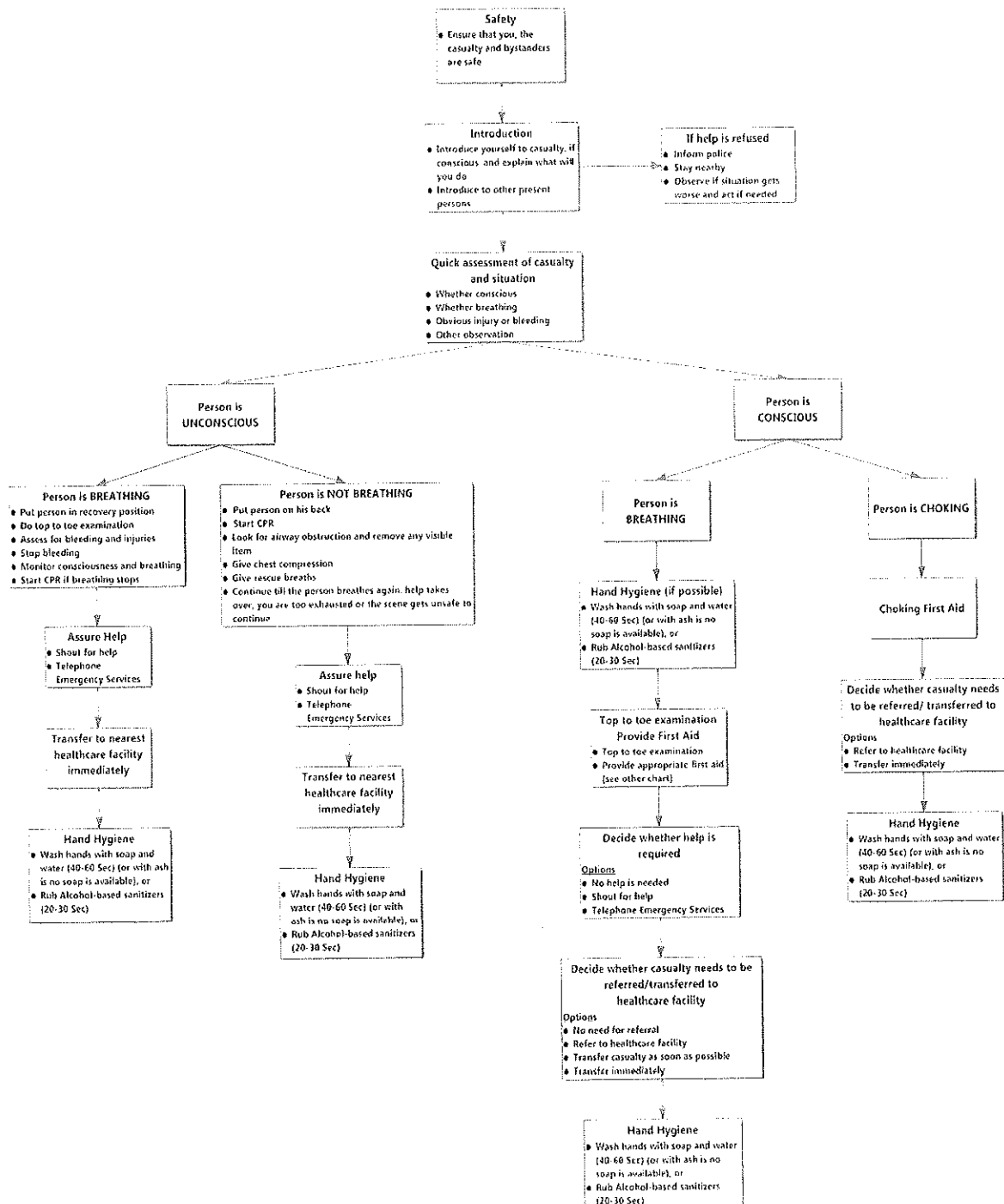
Indirect force

The bone breaks at the spot away from the spot of application of force e.g. collar-bone fracture when the fall is on outstretched hands, etc.

Muscular force

The fracture occurs due to a violent contraction of a group of muscles (e.g. fracture of ribs on violent cough). This type of fracture happens very rarely and is mostly related to other underlying diseases (e.g. weakened bone structure).

Q.3. Draw the first aid overview flow chart.





Q.4 Define dyspnea. Explain the grades of dyspnea.

Dyspnoea

Difficulty in breathing; shortness of breath

Grade of Dyspnea

Dyspnoea is divided into four different severity levels:

Grade I: The shortness of breath arises with a greater physical exertion, e.g. when climbing the stairs.

Grade II: The shortness of breath arises already with moderate physical strain, e.g. go straight.

Grade III: This is where the breathing is already at the smallest physical load, e.g. during trouser pulling and pulling out.

Grade IV: Dyspnoea at rest: dyspnoea also in rest, without physical activity.

Section – C

04X06 = 24 Marks

Q.1. Define burn. Explain the degree of burn.

Burn wounds

Burns are injuries to the skin and underlying tissue that result from the sun, heat sources, fire, hot items, boiling liquids, chemicals, irradiation, etc. However, cold can also create burn wounds!

FIRST, SECOND AND THIRD DEGREE BURNS

Burns are classified by the degree of skin and underlying tissues that are damaged. You will observe different signs and symptoms according to the severity of the burn wound.

First degree burns

Superficial first degree burns show following signs and symptoms:

Red or darker than usual skin;

Slightly swollen skin;

Painful, but mostly bearable.

These burns usually extend only into the epidermis.

Second degree burns

Intermediate second degree burns show following signs and symptoms:

Blistering,

Swelling,

Every painful.

These burns usually involve the epidermis and the dermis.

Third degree burns

Deep third degree burns show following signs and symptoms B

Black, parchment-like or white-looking burn wound;

Mostly dry;

No pain inside the third degree area, but very painful in the surrounding second and first degree burned parts of the skin.



Q.2. Define first aid. How to observe responsiveness?

First aid is the first assistance or treatment given to a casualty or a sick person for any injury or sudden illness before the arrival of an ambulance, the arrival of a qualified paramedical or medical person or before arriving at a facility that can provide professional medical care. As a consequence of disaster or civil strife people suffer injuries which requires urgent care and transportation to the nearest healthcare facility.

HOW TO OBSERVE RESPONSIVENESS AND CONSCIOUSNESS?

Unconsciousness occurs when a person is suddenly unable to respond to stimuli like sound or pain, and appears to be asleep. A person may be unconscious for a few seconds (as is the case with fainting) or for longer periods of time. People who become unconscious do not respond to loud sounds or shaking. They may even stop breathing or their pulse may become faint. This calls for immediate emergency attention. The sooner the person receives emergency first aid, the better it is. The AVPU scale (an acronym from "alert, voice, pain, unresponsiveness") is a system by which a first aider can measure and record a patient's responsiveness, indicating the level of consciousness. It is based on the casualty's eye opening, verbal and movement (motor) responses.

The AVPU scale has only four possible outcomes:

A – Alert.

The person is fully awake (although not necessarily oriented). The person will spontaneously open eyes, will respond to voice (although may be confused) and will have bodily motor function.

V – Responding to voice.

The person makes some kind of response when you talk to him. It could be opening his eyes, responding to your questions or initiating a move. These responses could be as little as a grunt, moan, or slight movement of a limb when prompted by the voice of the rescuer.

P – Responding to pain.

The patient makes a response of any kind on the application of pain stimulus, such as a central pain stimulus like a rub on his breastbone or a peripheral stimulus such as squeezing his fingers. Patients with some level of consciousness (a fully conscious patient would not require any pain stimulus) may respond by using their voice, moving their eyes, or moving part of their body (including abnormal posturing).

U - Unresponsiveness also noted as 'Unconsciousness'.

This outcome is recorded if the patient does not give any eye, voice or motor response to voice or pain.



Q.3. Define dressing. Difference between the adhesive and non-adhesive dressing.

A dressing is a protective covering applied to a wound to:

- Prevent infection,
- Absorb discharge,
- Control bleeding,
- Avoid further injury,
- Reduce pain.

ADHESIVE DRESSINGS (BAND AID)

These sterile dressings consist of a pad of absorbent gauze of cellulose held in place by a layer of adhesive material. Sterile adhesive dressings are supplied in paper or plastic covers.

The surrounding skin must be dry before application and all the edges of the dressing pressed firmly down

NON ADHESIVE DRESSING

READY-MADE STERILE DRESSING

The dressing consists of layers of gauze covered by a pad of cotton wool and with an attached roller bandage to hold it in position. The dressing is enclosed and sealed in protective covering (which is only broken while applying) and is supplied in various sizes.

Gauze dressing gauze

in layers is commonly used as a dressing for large wounds, as it is very absorbent, soft and pliable. It is liable to adhere to the wound; however, it may assist the clotting of blood. The dressing should be covered by one or more layers of cotton wool.

Improvised dressing

These can be formed from any clean soft absorbent material such as a clean handkerchief, a piece of linen, a clean paper, or cellulose tissue. They should be covered and retained in position.

Q.4. What do you understand transport technique? Describe the single helper transport technique.

TRANSPORT TECHNIQUES

After appropriate first aid has been given, the patient may need to be transported. Keep following guidelines in mind when transporting a casualty:

The position assumed by the casualty or in which he has been placed, should not be disturbed unnecessarily.

Throughout the transport a careful watch must be kept on:

The general condition of the casualty (breathing, consciousness);

Any dressing that may have been applied;

Any recurrence of hemorrhage,

Any signs of changes or worsening of the casualty's condition.

The transport must be safe, steady and speedy.



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The injured or sick person may be moved to a shelter, medical facility or hospital by:

A single helper;

Hand seats and the 'kitchen-chair' carry technique by multiple helpers;

Blanket lift by multiple helpers;

Stretcher by multiple helpers;

Wheeled transport (ambulance, car, ...);

Air and sea travel (with specially trained staff).

The method to be used (and it may be necessary to use more than one technique) may depend on:

The nature and severity of the injury;

The number of helpers and facilities available;

The distance to the shelter, medical facility or hospital; and

The nature of route to be covered.

SINGLE HELPER TRANSPORT

- This technique is only to be used in the case of light casualty or children. Lift the casualty by passing one of your arms well beneath his two knees and the other round his back.

HUMAN CRUTCH TECHNIQUE

- Standing at his injured side except where there is injury to an upper limb, assist the casualty by putting your arm round his waist, grasping the clothing at him and placing his arm round your neck, holding his hand with your free hand.
- If his upper limbs are injured and his other hand is free, the casualty may gain additional help from a staff or walking stick.
- If both legs are injured, another first aider might hold the other side in a similar way (see human crutch technique with two helpers).

PICK-A-BACK TECHNIQUE

If the casualty is conscious and able to hold, he may be carried in the ordinary "pick-a-back" fashion.

FIREMAN'S LIFT AND CARRY TECHNIQUE

- To be used only when the casualty is not heavy for the bearer.
- Help the casualty to rise to upright position.
- Grasp his right wrist with your left hand.
- Bend down with your head under his extended right arm so that your right shoulder is level with the lower part of his abdomen and place your right arm between or around his legs.
- Taking his weight on your right shoulder come to the erect position.
- Pull the casualty across both shoulder and transfer his right wrist to your right hand, so leaving your left hand free.
- This allows the helper also to move up or down a ladder whilst carrying the casualty

HC ambulance





BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1106

Course Name: First Aid, CPR and Palliative Care

Time: 2 Hours

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. How should you open the airway of an unconscious casualty?

- | | |
|-----------------------------|------------------|
| a) Head tilt and chin lift | b) Jaw thrust |
| c) Head tilt and jaw thrust | d) Lift the chin |

Q.2. When performing CPR on an adult, how deep should the chest compression be?

- | | |
|-----------------------------------------|-----------------------------------------|
| a) 1 ¹ / ₂ inches | b) 2 ¹ / ₂ inches |
| c) 2 inches | d) 3 inches |

Q.3. While doing CPR the compression ventilation ratio in an child should be?

- | | |
|---------|---------|
| a) 15:2 | b) 20:2 |
| c) 15:1 | d) 30:2 |

Q.4. What do you mean "Aims of First Aid"?

- | | |
|---------------------------------|---------------------|
| a) Preserve life | b) Promote recovery |
| c) Transport nearest healthcare | d) All of above |

Q.5. First degree burn is:

- | | |
|---------------------------------------|--------------------------------|
| a) Involve only the top layer of skin | b) Is red and blister |
| c) Destroys all layer of skin | d) Is the most serious of burn |

Q.6. What does ABC stand for?

- | | |
|-------------------------------|------------------------------------|
| a) Air way, Breath, Cardiac | b) Airflow, Breathing, Circulation |
| c) Air, Bounding, Circulation | d) Air way, Breathing, Circulation |

Q.7. Compound fracture is known as:

- | | |
|---------------------|-------------------|
| a) Open fracture | b) Close fracture |
| c) Complex fracture | d) All of above |

Q.8. How do you check for breathing?

- | | |
|------------------------|--------------------------|
| a) Listen | b) Look for rising chest |
| c) Feel with the cheek | d) Look, Listen an feel |



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Q.9. What is the first thing you should do for someone you suspect has an electrical burn?

- a) Check for breathing and pulse
- b) Check to see if electricity is turned off
- c) Check for severe bleeding
- d) Check for shock

Q.10. Elastic bandage is used:

- a) To control bleeding
- b) Control swelling and support injuries such as sprains or strains
- c) To allow circulation to a severed limb
- d) When applying a splint

Section – B

04X04 = 16 Marks

Q.1. Define burn. Describe the degree of burn.

Q.2. What do you understand drowning? What do you do if the victim is breathing or not breathing?

Q.3. Draw the first aid overview flow chart.

Q.4. Describe the complication of wounds.

Section – C

04X06 = 24 Marks

Q.1. How to perform CPR in adult?

Q.2. Define first aid. How to observe responsiveness?

Q.3. Define heat stroke. What do you do after heat stroke?

Q.4. What do you understand transport technique? Describe the four multi helper transport technique.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1106

Answer Key

Time: 2 Hours

Course Name: First Aid, CPR and Palliative Care

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. How should you open the airway of an unconscious casualty?

- | | |
|-----------------------------|------------------|
| a) Head tilt and chin lift | b) Jaw thrust |
| c) Head tilt and jaw thrust | d) Lift the chin |

Q.2. When performing CPR on an adult, how deep should the chest compression be?

- | | |
|-----------------------------------------|-----------------------------------------|
| a) 1 ¹ / ₂ inches | b) 2 ¹ / ₂ inches |
| c) 2 inches | d) 3 inches |

Q.3. While doing CPR the compression ventilation ratio in an child should be?

- | | |
|---------|---------|
| a) 15:2 | b) 20:2 |
| c) 15:1 | d) 30:2 |

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- | | |
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- b) Control swelling and support injuries such as sprains or strains**
- c) To allow circulation to a severed limb
- d) When applying a splint

Section – B

04X04 = 16 Marks

Q.1. Define burn. Describe the degree of burn.

Burn wounds

Burns are injuries to the skin and underlying tissue that result from the sun, heat sources, fire, hot items, boiling liquids, chemicals, irradiation, etc. However, cold can also create burn wounds!

FIRST, SECOND AND THIRD DEGREE BURNS

Burns are classified by the degree of skin and underlying tissues that are damaged. You will observe different signs and symptoms according to the severity of the burn wound.

First degree burns

Superficial first degree burns show following signs and symptoms:

- Red or darker than usual skin;
- Slightly swollen skin;
- Painful, but mostly bearable.

These burns usually extend only into the epidermis.

Second degree burns

Intermediate second degree burns show following signs and symptoms:

- Blistering,
- Swelling,
- Every painful.

These burns usually involve the epidermis and the dermis.

Third degree burns

Deep third degree burns show following signs and symptoms B

- Black, parchment-like or white-looking burn wound;
- Mostly dry;



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No pain inside the third degree area, but very painful in the surrounding second and first degree burned parts of the skin.

Q.2. What do you understand drowning? What do you do if the victim is breathing or not breathing?

DROWNING

Drowning causes asphyxia by water, weeds and mud entering into the lungs. When the lungs' alveoli are filled with water, they cannot exchange oxygen to and from the blood.

In case of 'dry drowning' the water never reaches the lungs. Instead, breathing in water causes the vocal cords spasm that shuts off his airways, making it hard to breathe.

'Secondary drowning' happens differently. The swimmer often appears fine immediately after swimming. But over time, water left in the swimmer's lungs begins to cause oedema, or swelling.

WHAT DO I DO IF THE VICTIM IS BREATHING?

If the person is breathing, put him in the recovery position and cover him with a blanket or coat to keep him warm.

Do not leave the victim alone and continue to observe him.

WHAT DO I DO IF THE VICTIM IS NOT BREATHING OR NOT BREATHING NORMALLY?

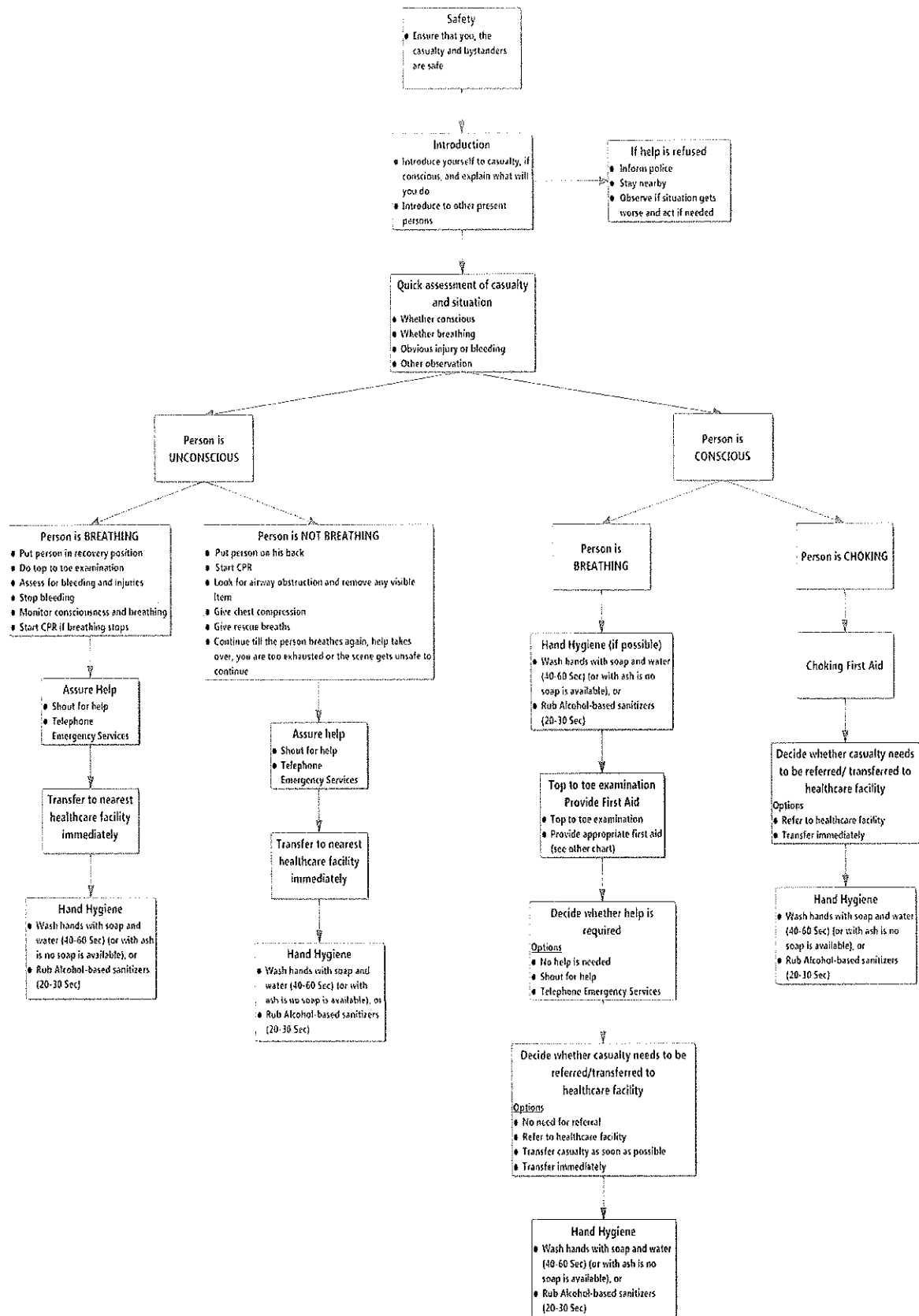
- Remove any cause of suffocation.
- If the person is not on his back, turn him on his back.
- Kneel down by the side of the person.
- Start CPR. Do not interrupt the resuscitation until: the victim starts to wake up, moves, opens eyes and breathes normally;
- Help (trained in CPR) arrives and takes over;
- You become too exhausted to continue; or the scene becomes unsafe for you to continue.

If the breathing starts again:

- a. Cover the victim.
- b. Arrange urgent transport to a hospital.
- c. Do not leave the victim alone and continue to observe him.
- d. If the breathing stops again, restart CPR.



Q.3. Draw the first aid overview flow chart.





Q.4. Describe the complication of wounds.

COMPLICATIONS OF WOUNDS

Wounds can cause two great dangers:

- Bleeding,
- Infection

BLEEDING

Bleeding is the immediate complication of a wound and must be treated immediately. D.1.1.2

INFECTION

Germs are tiny, not visible to the human eye, organisms that can cause diseases. Germs are bacteria, viruses, fungi and protozoa. An infection is caused by germs getting into the body through the broken skin. The germs multiply in the wound and make it 'infected', also called as 'septic'. Germs may later get into the bloodstream and cause a septicaemia. A wound is initially not infected, even though it may be contaminated by dirt or materials that contain germs. An infection occurs after a lapse of time when the germs have time to multiply and invade the tissues. This time varies with the number of germs and their virulence and the body's resistance to fight back. Pus formation is part of the body's method to fight an infection. The prevention of infection is very important. The first step consists of personal hygiene and the washing of your hands prior and after taking care of a person.

Section – C

04X06 = 24 Marks

Q.1. How to perform CPR in adult?

Reviving someone who is unconscious and/or not breathing or not breathing normally is called resuscitation. Chest compressions with or without rescue breathings are performed by an individual during cardio pulmonary resuscitation (CPR) in an attempt to restore spontaneous circulation.

WHAT DO I SEE AND ENQUIRE?

In case of a cardiac arrest (heart stops functioning) you might notice the following signs:

sudden collapse,

loss of consciousness,

no breathing,

no pulse (however this is not always easy for laypeople to confirm).

HOW TO OBSERVE RESPONSIVENESS AND CONSCIOUSNESS?

Unconsciousness occurs when a person is suddenly unable to respond to stimuli like sound or pain, and appears to be asleep. A person may be unconscious for a few seconds (as is the case with fainting) or for longer periods of time.



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People who become unconscious do not respond to loud sounds or shaking. They may even stop breathing or their pulse may become faint. This calls for immediate emergency attention. The sooner the person receives emergency first aid, the better it is.

The AVPU scale (an acronym from "alert, voice, pain, unresponsiveness") is a system by which a first aider can measure and record a patient's responsiveness, indicating the level of consciousness. It is based on the casualty's eye opening, verbal and movement (motor) responses.

The AVPU scale has only four possible outcomes:

A – Alert. The person is fully awake (although not necessarily oriented). The person will spontaneously open eyes, will respond to voice (although may be confused) and will have bodily motor function.

V – Responding to voice. The person makes some kind of response when you talk to him. It could be opening his eyes, responding to your questions or initiating a move. These responses could be as little as a grunt, moan, or slight movement of a limb when prompted by the voice of the rescuer.

P – Responding to pain. The patient makes a response of any kind on the application of pain stimulus, such as a central pain stimulus like a rub on his breastbone or a peripheral stimulus such as squeezing his fingers. Patients with some level of consciousness (a fully conscious patient would not require any pain stimulus) may respond by using their voice, moving their eyes, or moving part of their body (including abnormal posturing).

U - Unresponsiveness also noted as 'Unconsciousness'. This outcome is recorded if the patient does not give any eye, voice or motor response to voice or pain.

HOW TO OBSERVE THE BREATHING?

The airway may be narrowed or blocked making breathing noisy or impossible. Reasons for blockage may be:

- Loss of muscular control in the throat may allow the tongue to sag back and block the air passage.
- When the reflexes are impaired, saliva may lie in the back of the throat, blocking the airway.
- Any foreign body in the throat may block the air passage e.g. vomit, blood, dentures etc.

To observe the breathing do following:

- If the person is unconscious and is not on his back, turn him on to his back.
- Kneel beside the casualty.
- Lift the chin forwards with the index and middle fingers of one hand while pressing the forehead backwards with the palm of the other hand. This manoeuvre will lift the tongue forward and clear the airways.
- Observe breathing by listening, feeling and looking
- After opening the victim's airway, check to see if the victim is breathing.
- If the casualty's chest still fails to rise, first assume that the airway is not fully open. Once the airway is cleared the casualty may begin breathing spontaneously.



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HOW TO OBSERVE THE PULSE?

Feeling the pulse is not always easy. Feeling the pulse during an emergency at the wrist is often unreliable.

The pulse can be felt by placing the finger tips gently on the voice box and sliding them down into the hollow between the voice box and the adjoining muscle.

Do not lose time trying to locate and feel the pulse. The current resuscitation guidelines for laypeople direct that resuscitation (CPR) is to be started when the person is not breathing or not breathing normally and does not require to check the pulse.

RESUSCITATION OF A PERSON WHO IS NOT BREATHING OR NOT BREATHING NORMALLY

SAFETY FIRST AND CALL FOR HELP

- Make sure there is no danger to you, the person who needs help and bystanders before giving help.
- The person urgently needs help. Shout or call for help if you are alone but do not leave the person unattended. Ask a bystander to seek help or to arrange urgent transport to the nearest healthcare facility. Tell him to come back to you to confirm if help has been secured.

SECURE AN OPEN AIRWAY

- If the person is not on his back, turn him on to his back
- Kneel beside the casualty.
- Lift the chin forwards with the index and middle fingers of one hand while pressing the forehead backwards with the palm of the other hand. This manoeuvre will lift the tongue forward and clear the airways.
- Check for breathing.
- If the casualty's chest still fails to rise, first assume that the airway is not fully open. Once the airway is cleared the casualty may begin breathing spontaneously.
- Else, clear the airway by removing any visible item that is blocking the airway: Hook your first two fingers covered with clean cloth/gloves and sweep round inside the mouth/ throat.
- If the breathing restarts, place the patient in the recovery position (see recovery position).

CPR: HOW TO GIVE CHEST COMPRESSIONS?

- Turn the casualty on his back on a hard surface, if not already.
- Kneel next to the casualty, beside his upper arm.
- Place the heel of one hand in the center of the person's chest.
- Place the heel of the other hand on top of your first hand.
- Lock your fingers of both hands together.
- Make sure your shoulders are directly above the person's chest.
- With outstretched arms, push five to maximum six centimetres downwards.
- Release the pressure and avoid leaning on the chest between compressions to allow full chest recoil. The compression and release should be of equal duration.
- Do not allow your hands to shift or come away from the breastbone.
- Give 30 chest compressions in this way at a rate of 100 compressions a minute (you may go faster, but not more than 120 compressions a minute). This equates to just fewer than two compressions a second.



CPR: HOW TO GIVE RESCUE BREATHS?

- Put one hand on the person's forehead and tilt back his head.
- Put your other hand on the bony part of the chin and lift the chin
- Then pinch the person's nose with one hand that is on his forehead.
- Take a normal breath and then put your mouth completely over the person's mouth and seal with your lips. Calmly blow your air into the mouth of the person's for one second. Check if the person's chest rises.
- If the chest does not rise, take the following steps:
- Check if anything is in the person's mouth.
- Check that the head is well tilted and the chin is lifted properly.
- Start another series of 30 chest compressions prior to trying to blow air into the person's mouth again.
- The first rescuer gives 30 chest compressions followed by two ventilations and another set of 30 chest compressions and two ventilations.
- Then another rescuer takes over and repeats the above steps and switch again.
- Do not interrupt the resuscitation until:

Q.2. Define first aid. How to observe responsiveness?

First aid is the first assistance or treatment given to a casualty or a sick person for any injury or sudden illness before the arrival of an ambulance, the arrival of a qualified paramedical or medical person or before arriving at a facility that can provide professional medical care. As a consequence of disaster or civil strife people suffer injuries which requires urgent care and transportation to the nearest healthcare facility.

HOW TO OBSERVE RESPONSIVENESS AND CONSCIOUSNESS?

Unconsciousness occurs when a person is suddenly unable to respond to stimuli like sound or pain, and appears to be asleep. A person may be unconscious for a few seconds (as is the case with fainting) or for longer periods of time. People who become unconscious do not respond to loud sounds or shaking. They may even stop breathing or their pulse may become faint. This calls for immediate emergency attention. The sooner the person receives emergency first aid, the better it is. The AVPU scale (an acronym from "alert, voice, pain, unresponsiveness") is a system by which a first aider can measure and record a patient's responsiveness, indicating the level of consciousness. It is based on the casualty's eye opening, verbal and movement (motor) responses.

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U - Unresponsiveness also noted as 'Unconsciousness'.

This outcome is recorded if the patient does not give any eye, voice or motor response to voice or pain.

Q.3. Define heat stroke. What do you do after heat stroke?

HEATSTROKE

Normally the body dissipate the heat with the help of sweat glands.

In some cases, the body may not be able to dissipate the heat by sweating and the body temperature rises, sometimes up to 41.1 C (106 F) or higher. Or a dehydrated person may not be able to sweat fast enough to dissipate heat, which causes the body temperature to rise.

Heat regulation mechanism fails during heatstroke.

Heatstroke is a form of hyperthermia, an abnormally elevated body temperature with accompanying physical and neurological symptoms. Heatstroke is a true medical emergency that can be fatal if not properly and promptly treated. Most susceptible to heat strokes are infants and the elderly.

WHAT DO I SEE AND ENQUIRE?

Following signs and symptoms may be observed:

- A hot flushed, red dry skin
- The casualty complains of headache, dizziness or discomfort;
- The casualty may act confused or is restless;
- A full bounding pulse; and
- A body temperature above 40 degrees Celsius (>104 F)



WHAT DO I DO?

PROVIDE FIRST AID

- Help the casualty move to a cool place.
- Check the casualty's breathing and consciousness.
- Help the casualty to lie down with the legs slightly raised.
- Cool the casualty by sponging him or showering him with cool water.
- Make the casualty to rest.
- If the casualty is conscious, ask the casualty to drink water (this is an exception to the standard first aid guideline of not giving to drink or to eat to a casualty).
- Keep observing the casualty's breathing and consciousness.
- Transport the casualty to the nearest healthcare facility or hospital.

WHAT DO I DO IF THE PERSON IS UNCONSCIOUS, BUT IS STILL BREATHING?

- Put the person in the recovery position.
- Continue to observe the victim and check his breathing

WHAT DO I DO WHEN THE PERSON STOPPED BREATHING?

- Perform CPR. Do not interrupt the resuscitation until:
- The person starts to wake up, moves, opens his eyes and breathes normally;
- Help (trained in CPR) arrives and takes over;
- You become too exhausted to continue
- The scene becomes unsafe for you to continue.

Q.4. What do you understand transport technique? Describe the four multi helper transport technique.

TRANSPORT TECHNIQUES

After appropriate first aid has been given, the patient may need to be transported. Keep following guidelines in mind when transporting a casualty:

The position assumed by the casualty or in which he has been placed, should not be disturbed unnecessarily.

Throughout the transport a careful watch must be kept on:

The general condition of the casualty (breathing, consciousness);

Any dressing that may have been applied;

Any recurrence of hemorrhage,

Any signs of changes or worsening of the casualty's condition.

The transport must be safe, steady and speedy.



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The injured or sick person may be moved to a shelter, medical facility or hospital by:

A single helper;

Hand seats and the 'kitchen-chair' carry technique by multiple helpers;

Blanket lift by multiple helpers;

Stretcher by multiple helpers;

Wheeled transport (ambulance, car, ...);

Air and sea travel (with specially trained staff).

The method to be used (and it may be necessary to use more than one technique) may depend on:

The nature and severity of the injury;

The number of helpers and facilities available;

The distance to the shelter, medical facility or hospital; and

The nature of route to be covered.

MULTIPLE HELPER TRANSPORT.

When multiple helpers are available, following transport techniques can be used.

HUMAN CRUTCH TECHNIQUE

Standing at both sides of the casualty, both helpers assist the casualty by putting their arm round his waist, grasping the clothing at him and placing each of his arm on their side around their neck, holding his hand with their free hand.

HAND SEAT TECHNIQUES

he bearer by using one or both arms.

- Two bearers face each other behind the casualty and grasp their left wrists with their right hands and each other's right wrist their left hands.
- The casualty is instructed to place one arm around the neck of each bearer so that he may raise himself to sit on their hands and steady himself during transport.
- The bearers rise together and step off, the bearer on the right hand side of the casualty with the right foot and the left hand bearer with the left foot.
- The bearers walk with the cross-over step and not by side paces.

THE TWO-HANDED SEAT TECHNIQUE

- This seat is mostly used to carry a casualty who is unable to assist the bearers by using his arms.
- Two bearers face each other and stoop down (not kneel) one on each side of the casualty.
- Each bearer passes his forearm nearest the casualty's head under his back just below the shoulders and if possible takes hold of his clothing.



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- They slightly raise the casualty's back and then pass their other forearms under the middle of his thighs and grasp their hands, the bearer on the left of the casualty with his palm upwards and holding a folded handkerchief to prevent hurting by the finger nails; the bearer on the right of the casualty with his palm downwards, as shown in ("hook grip").
- The bearers rise together and stoop off, the right- hand bearer with the right foot and the left-hand bearer with the left foot. 5. The bearers walk with the cross-over step and not by side paces.

THE FORE AND AFT METHOD TECHNIQUE

This method of carrying should be used only when space does not permit a hand seat.

- One bearer stands between the casualty's legs, facing the feet with hands down and grasps the casualty under his knees.
- The other bearer takes a position behind the casualty and after raising his trunk passes his hands under the casualty's armpits and grasps his own wrists on the casualty's chest.
- The casualty is then lifted.
- The bearers walk in step.
- A chair can be used also to carry the casualty when negotiating a narrow passage or moving up/down the stairs (see kitchen-chair carry technique)

THE KITCHEN-CHAIR CARRY TECHNIQUE

The bearers walk in step by carrying the patient in a chair. Use this method when the casualty is light weight and the distance is small. This technique allows to climb up or down steps or stairs whilst carrying the casualty.

BLANKET LIFT TECHNIQUE

Place the casualty on to a blanket:

- a. Place the blanket or rug on the ground in line with the casualty, and rolled lengthwise for half its width.
 - b. Place the roller portion of the blanket or rug close to the casualty's back and gently rolls him over the roll until he is lying on his opposite side.
- If the casualty is suspected to have suffered a head, neck or spine injury or a fracture, two bearers maintain control of the head and lower limbs. The other 4-6 bearers very carefully turn the casualty on to his side every precaution being taken against movement at the site of the fracture. The bearers at the head and at the lower limbs conform to the rolling of the casualty throughout.
 - Unroll the rolled portion of the blanket or rug gently lowering the casualty on his back so that he lies on the centre of the open blanket or rug.
 - During lifting by a blanket, the edges are rolled up close to the casualty's sides and lifted by two or three persons on either side.



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THREE PERSON CARRY AND STRETCHER LIFT

Each person kneels on the same knee nearest the victim's feet.

- On the command of the person at the head, the rescuers lift the victim up and rest the victim on their knees.
- If the patient is being placed on a low stretcher or litter basket: On the command of the person at the head, the patient is placed down on the litter basket/stretchers.
- If the victim is to be carried: At this point, the rescuers will rotate the victim so that the victim is facing the rescuers, resting against the rescuers' chests.
- On the command of the person at the head, all the rescuers will stand.
- To walk, all rescuers will start out on the same foot, walking in a line abreast.
- Special care has to be taken in case of suspected backbone or neck injuries (see also section 0.6).

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1107

Set-A

Time: 2 Hours

Course Name: Vital Sign and Assisting in Drug Administration

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Most reliable method of taking temperature in toddler:

- a) By rectum
- b) By mouth
- c) By axilla
- d) Vagina

Q.2. High fever called if body temperature is more than:

- a) 101°F
- b) 102°F
- c) 105°F
- d) 107°F

Q.3. Which one below is not considered a "Vital Sign"?

- a) Temperature
- b) Blood pressure
- c) Pulse
- d) Weight

Q.4. Bradycardia means is:

- a) Decrease the pulse rate
- b) Increase the pulse rate
- c) Shortness of breathing
- d) Normal pulse rate

Q.5. Decrease respiration rate is called:

- a) Tachycardia
- b) Bradycardia
- c) Tachypnea
- d) Bradypnea

Q.6. Normal blood pressure is:

- a) 120/58 mm of Hg
- b) 120/80 mm of Hg
- c) 120/80 mm of Hp
- d) 120/80 mg of Hg

Q.7. Normal pulse rate of an old age ranges between:

- a) 100-110 beat/minute
- b) 110-120 beat/minute
- c) 50-60 beat/minute
- d) 60-80 beat/minute

Q.8. Normal rectal temperature is:

- a) 98.6°F
- b) 97.6°F
- c) 99.6°F
- d) 96.6°F



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Q.9. Intravenous injection is administered:

- a) Epidermally
- b) Hypodermally
- c) In the vein
- d) Intradermally

Q.10. Application of drugs on skin by local rubbing called:

- a) Topical
- b) Instillation
- c) Intracochlear
- d) Insertion

Section – B

04X04 = 16 Marks

- Q.1. Define pulse. Write down the factors influencing pulse rate.
- Q.2. Define fever. Explain the clinical signs of hypothermia.
- Q.3. Define Apical pulse. Write down the characteristics of pulse rate.
- Q.4 What do you mean by pharmacodynamics. Draw the flow chart of drug administration.

Section – C

04X06 = 24 Marks

- Q.1. Define tachycardia. Enlist the areas of body where we taking the pulse rate.
- Q.2. Explain the LADME and eight rights of medication administration.
- Q.3. What do you mean by respiration quality and rhythm?
- Q.4. Define hypertension. Write down the therapy and drug group of hypertension.

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Q.3. Which one below is not considered a "Vital Sign"?

- a) Temperature
- b) Blood pressure
- c) Pulse
- d) Weight

Q.4. Bradycardia means is:

- a) Decrease the pulse rate
- b) Increase the pulse rate
- c) Shortness of breathing
- d) Normal pulse rate

Q.5. Decrease respiration rate is called:

- a) Tachycardia
- b) Bradycardia
- c) Tachypnea
- d) Bradypnea

Q.6. Normal blood pressure is:

- a) 120/58 mm of Hg
- b) 120/80 mm of Hg
- c) 120/80 mm of Hp
- d) 120/80 mg of Hg

Q.7. Normal pulse rate of an old age ranges between:

- a) 100-110 beat/minute
- b) 110-120 beat/minute
- c) 50-60 beat/minute
- d) 60-80 beat/minute

Q.8. Normal rectal temperature is:

- a) 98.6°F
- b) 97.6°F
- c) 99.6°F
- d) 96.6°F



Q.9. Intravenous injection is administered:

- a) Epidermally
- b) Hypodermally
- c) In the vein
- d) Intradermally

Q.10. Application of drugs on skin by local rubbing called:

- a) Topical
- b) Instillation
- c) Intracochlear
- d) Insertion

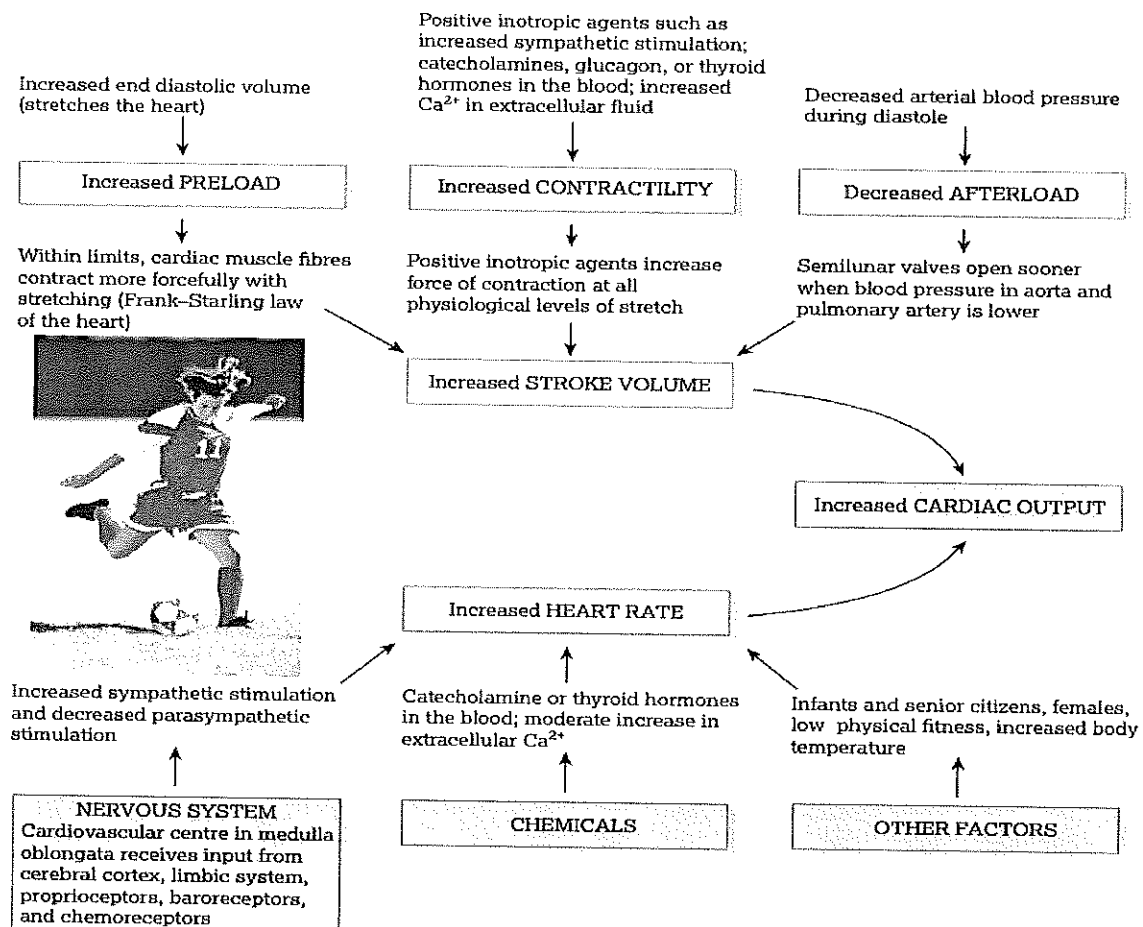
Section – B

04X04 = 16 Marks

Q.1. Define pulse. Write down the factors influencing pulse rate.

Pulse

Pulse rate is the number of times the heart beats per minute (bpm). During the cardiac cycle, the pulse is the wave of blood that courses through the body when the left ventricle contracts. After contraction, the heart rests as the cardiac muscle relaxes and the ventricle is filling with blood again. Each pulse beat represents one complete cardiac cycle or one heartbeat: contraction and relaxation. In a healthy adult, a normal per-minute resting heart rate ranges from 60 to 100 beats a minute. With physical exertion, the muscles require more oxygen, resulting in an increased heart (pulse) rate and respiration (breathing) rate. A resting pulse rate above 100 bpm is considered to be a rapid pulse rate, or tachycardia, and a rate below 60 bpm is considered to be a slow pulse rate, or bradycardia.





Q.2. Define fever. Explain the clinical signs of hypothermia.

Fever

Fever or pyrexia is a body temperature above 38°C. When the body is in a feverish state, it is producing more heat than it is losing. A condition caused by fever is termed febrile; a condition not caused by fever is termed afebrile. For example, a febrile seizure is a seizure caused by fever, whereas an afebrile seizure is caused by something other than a fever, such as a head trauma.

Hypothermia

The reverse of hyperthermia is a below normal body temperature or hypothermia. Hypothermia is defined as a body temperature below 35°C and is the result of the body losing more heat than it is producing. Hypothermia commonly occurs in cases of environmental exposure to cool or cold temperatures and/or submersion in cold water. In general, a body temperature below 33.3°C is considered severe hypothermia and may be life-threatening. Clinical signs of hypothermia are:

- lack of muscle coordination
- slurred speech
- violent shivering
- decreased pulse and respirations
- pale
- waxy
- cool skin
- drowsiness
- dazed consciousness progressing to coma and death.

Q.3. Define Apical pulse. Write down the characteristics of pulse rate.

Apical Pulse:

The apical pulse is a pulse site on the left side of the chest over the pointed end, or apex, of the heart. A doctor might palpate or listen to the apical pulse when evaluating a person's heart health. The pulse, or heart rate, is an important indicator of health.

Characteristics of Pulse Rate

The following characteristics need to be taken into consideration when taking pulse rates and are often noted in the patient's record:

- rate is the number of pulse beats per minute (bpm).
- Volume, or force, refers to the strength of the pulse when the heart contracts. Volume is influenced by the forcefulness of the heartbeat, the condition of the arterial walls, and hydration or dehydration. A variance in intensity of the pulse may indicate heart disease. The most common volume characteristics are:
 - A full or bounding pulse, indicating an increase in blood volume.
 - A weak or thready pulse, indicating a barely perceptible force or blood volume.
- rhythm refers to the regularity, or equal spacing, of all the beats of the pulse. Normally, the intervals between each heartbeat are of the same duration. A pulse with an irregular rhythm is known as a dysrhythmia or arrhythmia. The irregular rhythm may be either a set of random irregular beats or a predictable pattern of irregular beats. An intermittent pulse occurs when the



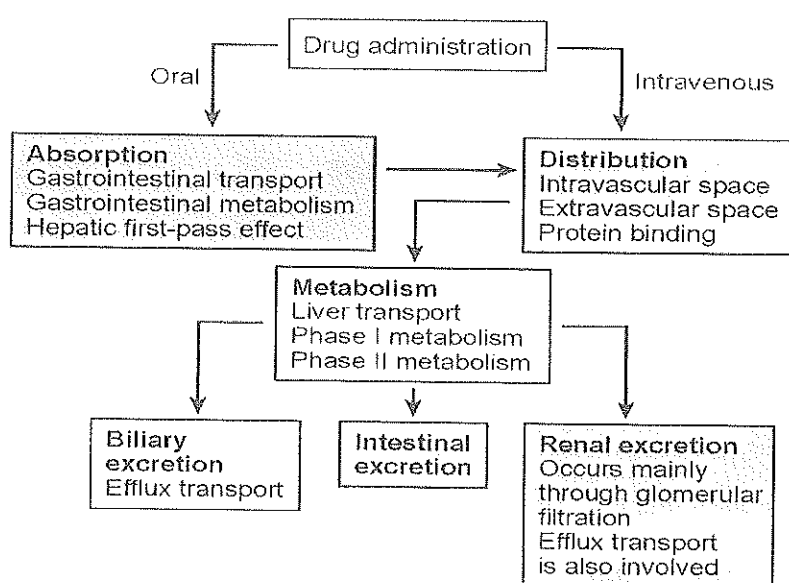
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- heart occasionally skips a beat. This is not considered abnormal if it does not happen frequently. Exercise or drinking a caffeine-rich beverage may cause this to occur. However, if arrhythmia occurs on a consistent basis, it may indicate heart disease and should be brought to the attention of the physician. If an irregular pulse is detected, the apical pulse should be assessed. The physician may also order further testing, such as an electrocardiogram (ECG), to further assess the arrhythmia.

Q.4 What do you mean by pharmacodynamics. Draw the flow chart of drug administration.

pharmacodynamics which is the study of the mechanisms of action of drugs and other biochemical and physiological effects, i.e. what the drug does to the body.

Route of drug administration



Section – C

04X06 = 24 Marks

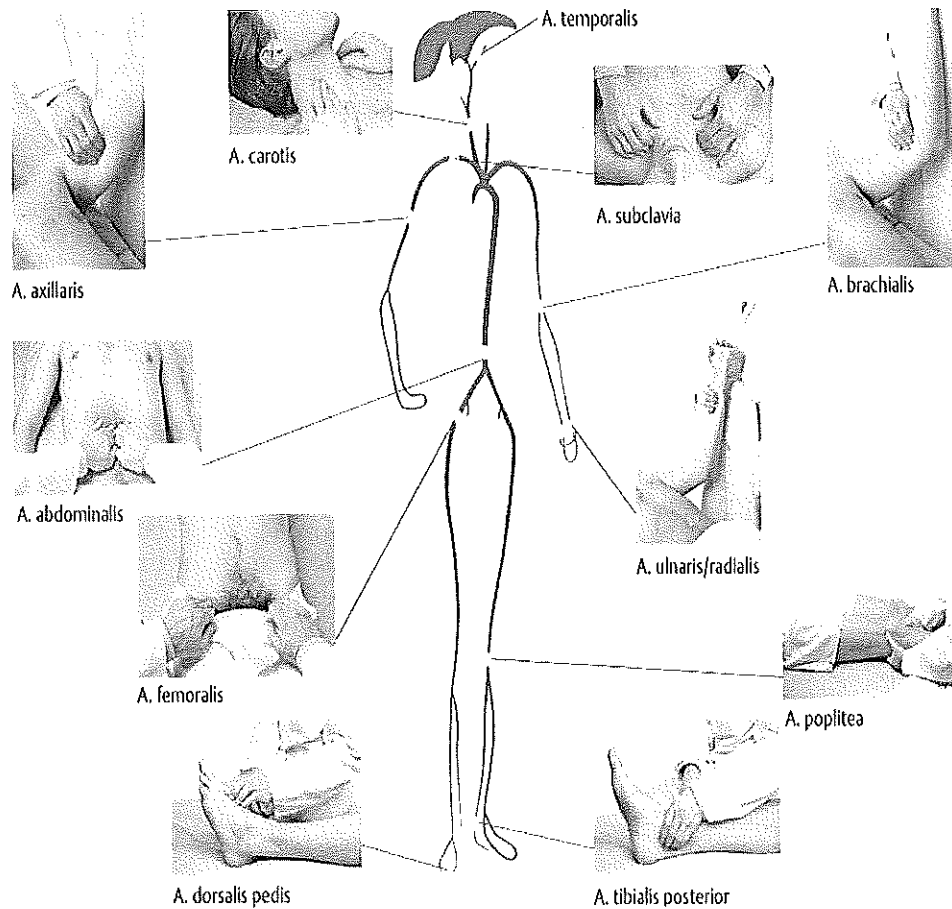
Q.1. Define tachycardia. Enlist the areas of body where we taking the pulse rate.

Tachycardia

Tachycardia is the medical term for a heart rate over 100 beats per minute. There are many heart rhythm disorders (arrhythmias) that can cause **tachycardia**.

Pulse Sites

There are nine areas in the body that allow for easy measurement of the pulse. These pulse sites are at the temporal, carotid, apical, femoral, brachial, radial, popliteal, posterior tibial, and dorsalis pedis arteries.



Pulse sites on the human body.

Q.2. Explain the LADME and eight rights of medication administration.

LADMA

L	LIBERATION	Information regarding the release of a nutrient from a particular delivery system utilized in a dietary supplement.
A	ABSORPTION	Describes the process of a nutrient entering the body's fluids and tissues.
D	DISTRIBUTION	Describes dissemination of the nutrient throughout the body's fluids and tissues.
M	METABOLISM	Describes the process also known as biotransformation that converts nutrients into active substances.
E	EXCRETION	Contains information regarding elimination of the nutrient and/or its metabolites from the body.



The Eight rights of safe medication administration

1. Right patient	<ul style="list-style-type: none">• Ask the patient their first and last name• Does the order match the patient?
2. Right medication	<ul style="list-style-type: none">• Does the medication label match the order?• Be vigilant with look-alike and sound-alike medications
3. Right dose	<ul style="list-style-type: none">• Does the strength and dosage match the order?• Is it half, whole or multiple tablets?
4. Right time	<ul style="list-style-type: none">• Does the administration time match the order?
5. Right route	<ul style="list-style-type: none">• Does the route match the order?• Can this be crushed or mixed in other substances?• Have any transdermal patches been removed?
6. Right documentation	<ul style="list-style-type: none">• Document immediately after the medication is administered
7. Right response	<ul style="list-style-type: none">• Make sure that the drug led to the desired effect. If an antihypertensive was given, has his/her blood pressure improved? Does the patient verbalize improvement in depression while on an antidepressant?• Be sure to document your monitoring of the patient and any other nursing interventions that are applicable.
8. Right Reason	<ul style="list-style-type: none">• Confirm the rationale for the ordered medication. What is the patient's history? Why is he/she taking this medication?• Revisit the reasons for long-term medication use.

Q.3. What do you mean by respiration quality and rhythm?

Respiratory Rhythm

Respiratory rhythm, similar to pulse rhythm, refers to the regular and equal spacing of breaths. In a regular respiratory rhythm, the cycles of inspiration and expiration have about the same rate and depth. With irregular breathing patterns, the depth and amount of air inhaled and exhaled and the rate of respirations per minute will vary. When you detect abnormalities in respiratory rhythm, continue assessment and measurement of breathing for 2 to 3 more minutes. This will help establish a more complete pattern of what is happening with the patient's respiratory cycle. Patients with emphysema may not experience difficulty with inhalation but may struggle to fully exhale. Asthma may also cause an irregularity in breathing rhythm.

Respiratory Quality

Respiratory quality or character refers to breathing patterns—both normal and abnormal. Labored breathing refers to respirations that require greater effort from the patient.



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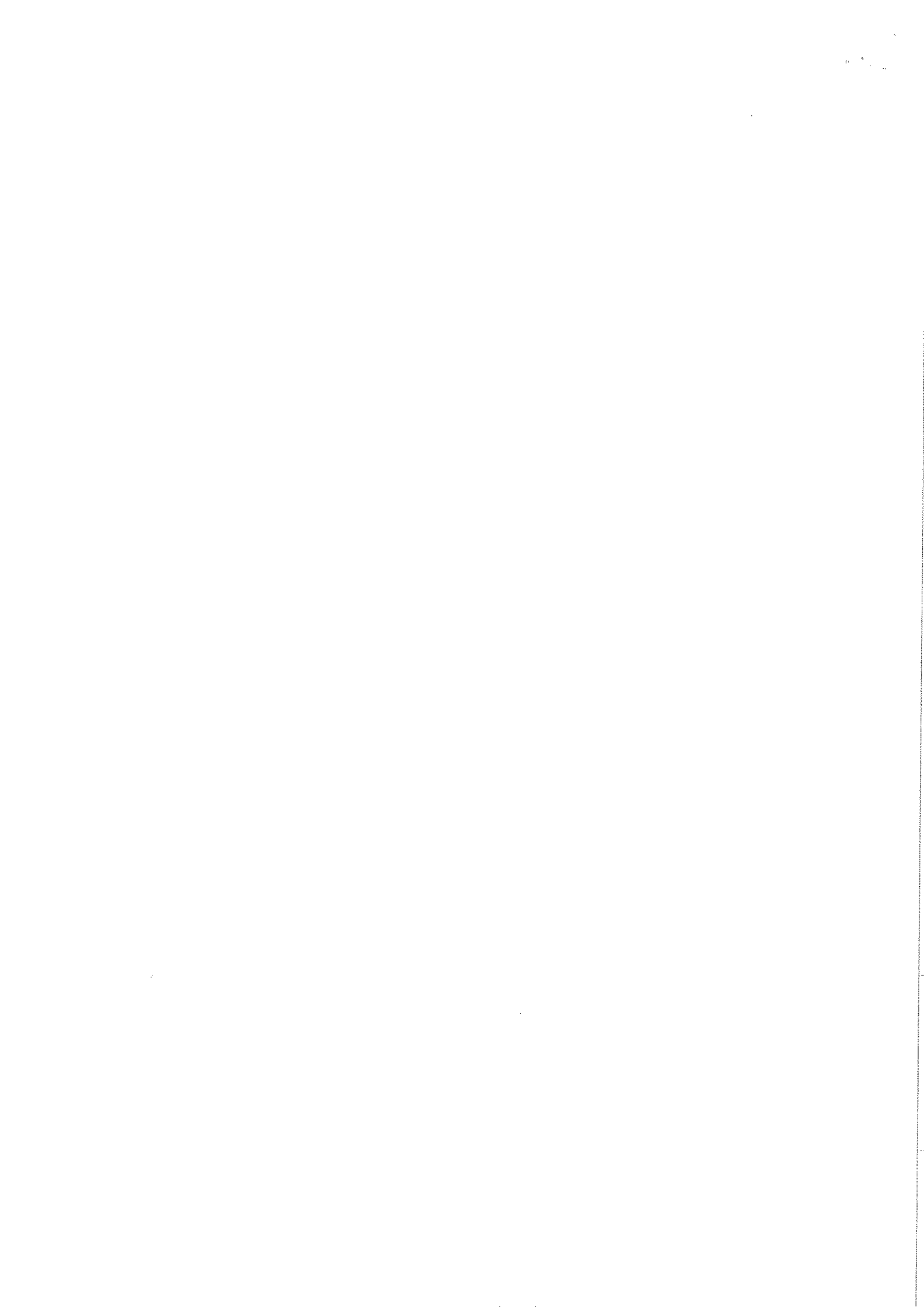
Q.4. Define hypertension. Write down the therapy and drug group of hypertension.

Hypertension

Hypertension, or high blood pressure, is a very common and serious condition that can lead to or complicate many health problems. The risk of cardiovascular morbidity and mortality is directly correlated with blood pressure. Risks of stroke, angina, heart failure, kidney failure or early death from a cardiovascular cause are directly correlated with BP. Hypertension is often called "the silent killer" because it generally has no symptoms until serious complications develop.

Drug Groups			
	Description	Side Effects	Examples
Betablocker	Betablockers are heart medications that slow the pulse.	Ingestion of beta blockers may cause <ul style="list-style-type: none">• drowsiness• dizziness• bradycardia• dyspnoea• bronchial asthma.	Tenormin®
Diuretics	Diuretics promote urinary excretion. They are used in cardiac insufficiency.	The increased excretion of urine can lead to a reduced volume of blood. <ul style="list-style-type: none">• headache• dizziness• weakness• drowsiness• blurred vision• mouth dryness	Lasix®
ACE-Blocker	ACE blockers are among the group of vasodilators.	A common side effect is a troublesome <ul style="list-style-type: none">• dry cough• gastrointestinal disturbances	Reniten®

Ac
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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1107

Course Name: Vital Sign and Assisting in Drug Administration

Time: 2 Hours

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Which medication is used to control the pain?

- | | |
|--------------|---------------|
| a) Analgesic | b) Hypnotics |
| c) Antacid | d) Antiemetic |

Q.2. Hyperpyrexia called if body temperature is more then:

- | | |
|------------|------------|
| a) 99.6°F | b) 102.6°F |
| c) 104.6°F | d) 101.6°F |

Q.3. Which one below is not considered a "Vital Sign"?

- | | |
|----------------|-------------------|
| a) Temperature | b) Blood pressure |
| c) Pulse | d) Weight |

Q.4. Tachypnea means is:

- | | |
|----------------------------------|--------------------------------|
| a) Increase the temperature | b) Increase the pulse rate |
| c) Increase the respiration rate | d) Increase the blood pressure |

Q.5. Decrease respiration rate is called:

- | | |
|----------------|----------------|
| a) Tachycardia | b) Bradycardia |
| c) Tachypnea | d) Bradypnea |

Q.6. Normal pulse pressure is:

- | | |
|-----------------|----------------|
| a) 50 mm of Hg | b) 70 mm of Hg |
| c) 120 mm of Hg | d) 40 mg of Hg |

Q.7. Normal pulse rate of 11-16 years' ranges between:

- | | |
|----------------------|-----------------------|
| a) 50-60 beat/minute | b) 30-70 beat/minute |
| c) 70-90 beat/minute | d) 95-100 beat/minute |

Q.8. Normal temperature of temporal artery is:

- | | |
|-----------|-----------|
| a) 98.6°F | b) 37.6°C |
| c) 99.6°F | d) 36.4°C |



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Q.9. Intramuscular injection is administered:

- | | |
|------------------|------------------|
| a) In vein | b) In artery |
| c) In the muscle | d) None of above |

Q.10. Application of drugs on skin by local rubbing called:

- | | |
|------------------|-----------------|
| a) Topical | b) Instillation |
| c) Intracochlear | d) Insertion |

Section – B

04X04 = 16 Marks

- Q.1. Difference between the osmosis and diffusion.
Q.2. Explain the korotkoff sounds.
Q.3. Define hypotension. Write down the common symptoms of hypotension.
Q.4 Difference between the respiratory rate and rhythm.

Section – C

04X06 = 24 Marks

- Q.1. Define medicine. Write down the indication, contraindication and drug interaction.
Q.2. Describe the route of drug administration.
Q.3. Explain the six abnormal breath sound.
Q.4. Convert 20⁰ celcius (A nice day) to Fahrenheit.

IPC amphiprotic



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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1107

Answer key

Time: 2 Hours

Course Name: Vital Sign and Assisting in Drug Administration

Max. Marks: 50

Instruction:

1. SECTION-A: Answer all questions from section A. Each question carries 01 mark
2. SECTION-B: Answer all questions from section B. Each question carries 04 marks
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Section – A

10X01 = 10 Marks

Q.1. Which medication is used to control the pain?

- a) Analgesic
- b) Hypnotics
- c) Antacid
- d) Antiemetic

Q.2. Hyperpyrexia called if body temperature is more then:

- a) 99.6°F
- b) 102.6°F
- c) 104.6°F
- d) 101.6°F

Q.3. Which one below is not considered a "Vital Sign"?

- a) Temperature
- b) Blood pressure
- c) Pulse
- d) Weight

Q.4. Tachypnea means is:

- a) Increase the temperature
- b) Increase the pulse rate
- c) Increase the respiration rate
- d) Increase the blood pressure

Q.5. Decrease respiration rate is called:

- a) Tachycardia
- b) Bradycardia
- c) Tachypnea
- d) Bradypnea

Q.6. Normal pulse pressure is:

- a) 50 mm of Hg
- b) 70 mm of Hg
- c) 120 mm of Hg
- d) 40 mm of Hg

Q.7. Normal pulse rate of 11-16 years' ranges between:

- a) 50-60 beat/minute
- b) 30-70 beat/minute
- c) 70-90 beat/minute
- d) 95-100 beat/minute

Q.8. Normal temperature of temporal artery is:

- a) 98.6°F
- b) 37.6°C
- c) 99.6°F
- d) 36.4°C

Q.9. Intramuscular injection is administered:

- | | |
|------------------|------------------|
| a) In vein | b) In artery |
| c) In the muscle | d) None of above |

Q.10. Application of drugs on skin by local rubbing called:

- | | |
|------------------|-----------------|
| a) Topical | b) Instillation |
| c) Intracochlear | d) Insertion |

Section – B

04X04 = 16 Marks

Q.1. Difference between the osmosis and diffusion.

Transport mode	Description	Diagram
Osmosis	Movement of water from an area of low solute concentration to an area of high solute concentration	
Diffusion	Movement of solutes from an area of high concentration to an area of low concentration	

Q.2. Explain the korotkoff sounds.

Korotkoff Sounds

Korotkoff sounds, named after the Russian neurologist, Nicolai Korotkoff, are the rhythmic, tapping sounds heard while taking blood pressure as the arterial wall distends under the compression of the cuff. These sounds appear and disappear as the blood pressure cuff is inflated and deflated. With the blood pressure cuff placed and inflated on the brachial artery, no sound can be heard through the stethoscope because the brachial artery is fully compressed and no blood is flowing through it. As the cuff deflates and air is slowly removed from the cuff, the Korotkoff sounds become audible.

Phase I	This is the first faint sound heard as the cuff is deflated. The number that appears on the blood pressure gauge at that moment is recorded as the systolic pressure reading. The cuff must first be inflated to a level high enough to hear this first sound during relaxation. If the cuff is not inflated high enough and a pulse is heard immediately after deflation, stop the procedure, remove the cuff, wait a couple of minutes, and then start the procedure again, inflating the cuff at least 20 mmHg above the first attempt.
Phase II	The second phase occurs as the cuff continues to be deflated and more blood flows through the artery. This sound has a swishing quality. The cuff has to be slowly deflated to hear this soft sound. An auscultatory gap is said to have



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	occurred if there is a total loss of sound that then reoccurs later. An auscultatory gap can occur in certain cases of heart disease and hypertension and should be reported to the physician.
Phase III	During this phase, the sound will become less muffled and develop a crisp tapping sound as the blood flow moves easily through the artery. If the BP cuff was not inflated enough to hear the Phase I sound, then the Phase III sound may be heard and incorrectly stated as the systolic reading.
Phase IV	This phase is characterized by the sound beginning to fade and become muffled. The American Heart Association, which believes Phase IV is the best indicator of the diastolic pressure, recommends the reading at this phase be recorded as the diastolic pressure for a child.
Phase V	Sound will disappear during this phase. Some physicians may require both Phase IV and Phase V recorded for the diastolic pressure reading.

Q.3. Define hypotension. Write down the common symptoms of hypotension.

Hypotension – Low blood pressure

Low blood pressure is a reading of below 90/60. Naturally-low blood pressure doesn't have any symptoms. However, if it drops too low you may experience symptoms, so it might need to be treated. Common symptoms of low blood pressure include:

- feeling dizzy or light-headed (especially when you stand up after sitting or lying down)
- blurred vision
- feeling weak
- feeling muddled or confused

Q.4 Difference between the respiratory rate and rhythm.

Respiratory Rate

Respiratory rate is the number of respirations per minute. The normal respiration rate for healthy adults at rest is 12 to 20 cycles per minute. Children have a more rapid rate of breathing than adults, with an average of 30 to 60 cycles per minute, depending on age. Table 34-8 lists respiratory rates for various age groups. An adult respiratory rate below 12 (**bradypnea**) or above 20 (**tachypnea**) should be considered a serious symptom and immediately brought to the physician's attention. Rapid respirations are usually shallow in depth because the lungs are unable to fully expand. **Apnoea** means the absence of breathing for a period lasting longer than 19 seconds, and **eupnoea** refers to normal breathing. Many factors may affect the respiratory rate: elevated temperature, age, pain, medications, and some medical conditions. For example, an elevated body temperature in both adults and children can result in an elevated respiratory rate. Extreme pain may also cause respirations to increase.

Respiratory Rhythm

Respiratory rhythm, similar to pulse rhythm, refers to the regular and equal spacing of breaths. In a regular respiratory rhythm, the cycles of inspiration and expiration have about the same rate and depth. With irregular breathing patterns, the depth and amount of air inhaled and exhaled and the rate of respirations per minute will vary. When you detect abnormalities in respiratory rhythm, continue assessment and measurement of breathing for 2 to 3 more minutes. This will help establish a more complete pattern of what is happening with the patient's respiratory cycle. Patients with emphysema may not experience difficulty with inhalation but may struggle to fully exhale. Asthma may also cause an irregularity in breathing rhythm.



Section – C

04X06 = 24 Marks

Q.1. Define medicine. Write down the indication, contraindication and drug interaction.

Definition

The definition of a medicine is:

- Any substance or combination of substances presented as having properties for treating or preventing disease in human beings; or [SEP]
- Any substance or combination of substances which may be used in or administered to human beings either with a view to restoring, correcting or modifying physiological functions by exerting a pharmacological, immunological or metabolic action, or to making a medical diagnosis. [SEP]

The indication for a drug refers to the use of that drug for treating a particular disease. Drugs often have more than one indication, which means that there is more than one disease for which it could be used. Indications may be diagnostic, prophylactic or for therapeutic purposes.

A contraindication to a medicine is a specific situation in which a medicine should not be used, because it may be harmful to the patient. This could be due to the patient's allergy status, co-morbidities, current disease state or other medicines they are taking.

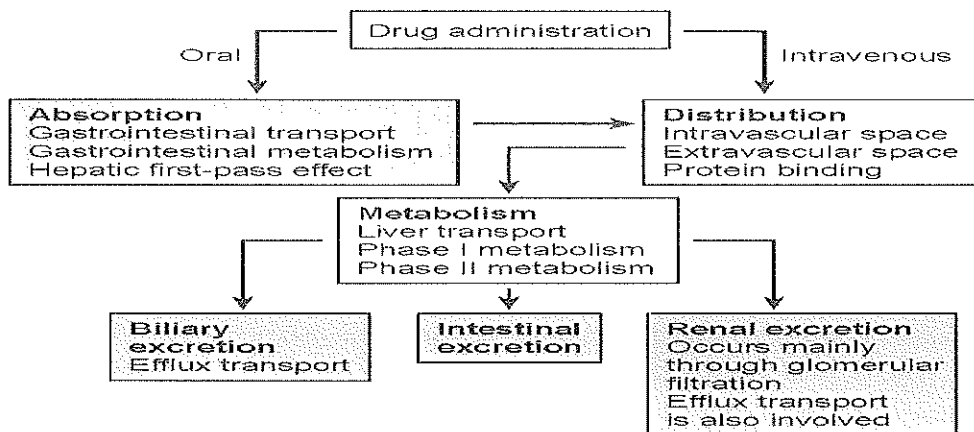
A drug interaction is when a substance (e.g. another medicine, food) affects the activity of a drug when both are administered together. This action can be synergistic (when the drug's effect is increased) or antagonistic (when the drug's effect is decreased) or a new effect can be produced that neither drug produces on its own. Interactions between drugs are termed drug–drug interactions and interactions between drugs and foods are known as drug–food interactions. It is important not to forget over-the-counter, herbal and complementary medicines when considering potential interactions.

Q.2. Describe the route of drug administration.

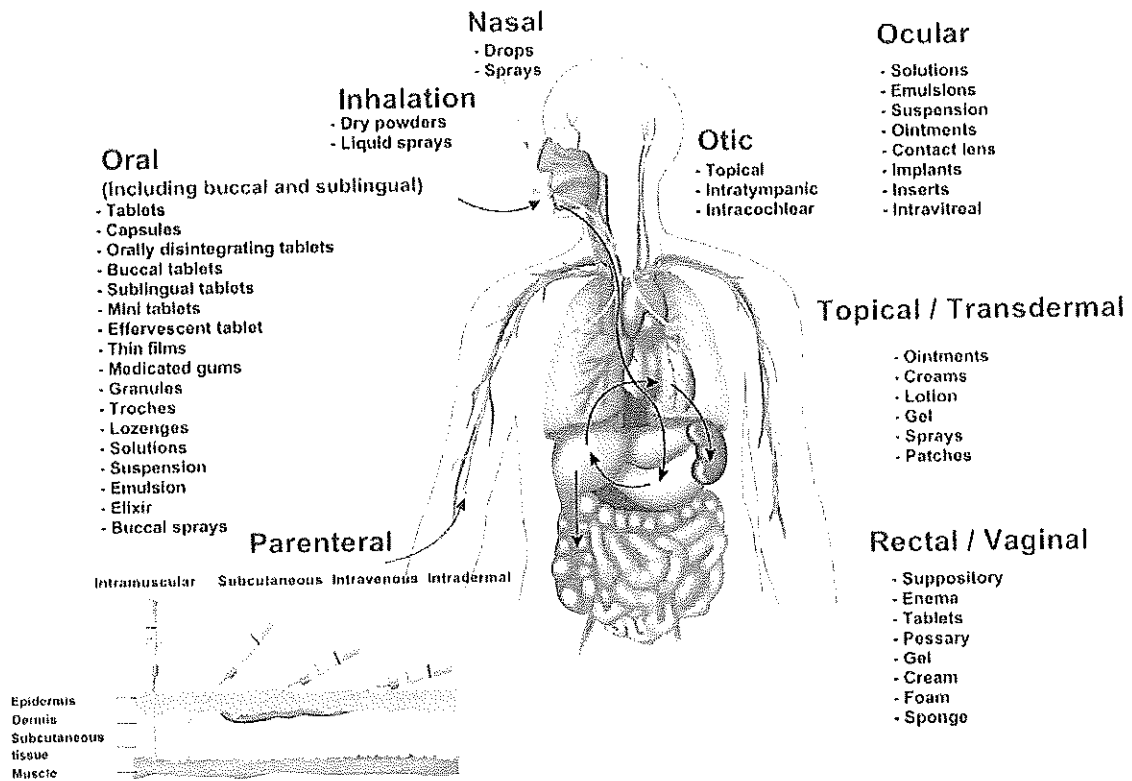
Routes of administration

The three basic routes of administration are enteral, parenteral and topical. The enteral route uses the gastrointestinal (GI) tract for absorption of drugs. The parenteral route bypasses the GI tract and is associated with all forms of injections. The topical route also bypasses the GI tract and is associated with drugs that are administered to the skin and mucous membranes.

Route of drug administration



Route of drug administration



Q.3. Explain the six abnormal breath sound.

Breath Sounds

Normal respirations do not usually have any noticeable sounds. However, certain diseases and illnesses can cause irregular respiration sounds. Terms for describing these abnormal breath sounds include the following:

Stridor	A shrill, harsh sound, heard more clearly during inspiration but that can occur during expiration. This sound may occur when there is airway blockage, such as in children with croup and patients with laryngeal obstruction.
Stertor (stertorous breathing)	Noisy sounds during inspiration, sounds like those heard in snoring.
Crackles (also called rales)	Crackling sounds resembling crushing tissue paper, caused by fluid accumulation in the airways. Crackles can be further defined as coarse or fine. Crackles can be heard with pulmonary edema, asthma, early congestive heart failure, and some types of pneumonia.
Rhonchi	Rattling, whistling, low-pitched sounds made in the throat. Rhonchi can be heard in patients with pneumonia, chronic bronchitis, cystic fibrosis, or COPD (chronic obstructive pulmonary disease).
Wheezes	Sounds like rhonchi but more high-pitched, made when airways become obstructed or severely narrowed, as in asthma or COPD.
Cheyne-Stokes breathing	Irregular breathing that may be slow and shallow at first, then faster and deeper, and that may stop for a few seconds before beginning the pattern again. This type of breathing may be seen in certain patients with traumatic brain injury, strokes, and brain tumors.



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Q.4. When are used to analgesics and antacid drug? How to Convert 20°Celsius (A nice day) to Fahrenheit?

Analgesics	Inhibit the sensation of pain, without narcotic effect, a distinction is made between non-opioid and opioid analgesics. Opioid painkillers are narcotics.
Antacids	Bind and neutralize excessive gastric acid and form a protective film over the gastric mucosa

Formula - $(0^{\circ}\text{C} \times 9/5) + 32 = 32^{\circ}\text{F}$

$(20^{\circ} * 9/5) + 32 = 68^{\circ}\text{F}$ Hypothermia

ILC OMP/AC/25



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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1108

Course Name: Support and Breathing

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Time: 2 Hours

Max. Marks: 50

Section – A

10X01 = 10 Marks

Q.1. The ejaculated bronchial secretion is called....

- a) Sputum
- b) Bronchus
- c) Mucus
- d) Saliva

Q.2. What are the action of antitussive drug?

- a) Relieve the cough
- b) Block the cough
- c) Both A & B
- d) None of above

Q.3. Which type of therapy is been given in tuberculosis?

- a) Anti DOTS
- b) DOTS
- c) DOST
- d) All of above

Q.4. What are the name of anticoagulation medicine?

- a) Aprotinine
- b) Anti fibrinolytic
- c) Heparin
- d) Urokinase

Q.5. Bradypnea is known as:

- a) Shortness of breathing
- b) Increase the breathing
- c) Absence of breathing
- d) Normal breathing

Q.6. Normal respiration rate of an adult ranges between:

- a) 18-24 breath/minute
- b) 25-28 breath/minute
- c) 30-60 breath/minute
- d) 20-24 breath/minute

Q.7. Which respiratory sound indicate are patient suffer from bulge in the nose?

- a) Stridor
- b) Rattle noise
- c) Snore
- d) Moisture

Q.8. The meaning of necrosis:

- a) Blueness of skin
- b) Redness of skin
- c) Destruction of tissue
- d) Destruction of muscle



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Q.9. How much oxygen should give to a patient with nasal cannula?

- a) 1-4 liters of O₂
- b) 2-8 liters of O₂
- c) 1-4 milliliters of O₂
- d) 4-9 liters of O₂

Q.10. Full form of COPD is:

- a) Chronic obstructive pulmonary disease
- b) Complete obstruction pulmonary disease
- c) Chronic obstruction pulmonary dyspnoea
- d) Chronic obstructive pulmonary distress

Section – B

04X04 = 16 Marks

Q.1. Define breathing. write down the types of breathing.

Q.2. What do you mean pneumonia prophylaxis?

Q.3. Define lung embolism. Write down the eight symptoms of lung embolism?

Q.4 Write down the complication of oxygen administration?

Section – C

04X06 = 24 Marks

Q.1. Define anxiety. Write down the four cause, symptom and categories of anxiety.

Q.2. What do you mean tuberculosis? Write down the cause, symptom and therapy of tuberculosis?

Q.3. Define Bronchial asthma. Write down the four causes and therapy in asthma attack patient.

Q.4. Define pneumonia. Write down the four causes and symptom of pneumonia.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1108

Answer key

Time: 2 Hours

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- c) Absence of breathing
- d) Normal breathing

Q.6. Normal respiration rate of an adult ranges between:

- a) 18-24 breath/minute
- b) 25-28 breath/minute
- c) 30-60 breath/minute
- d) 20-24 breath/minute

Q.7. Which respiratory sound indicate are patient suffer from bulge in the nose?

- a) Stridor
- b) Rattle noise
- c) Snore
- d) Moisture

Q.8. The meaning of necrosis:

- a) Blueness of skin
- b) Redness of skin
- c) Destruction of tissue
- d) Destruction of muscle



Q.9. How much oxygen should give to a patient with nasal cannula?

- a) 1-4 liters of O₂
- b) 2-8 liters of O₂
- c) 1-4 milliliters of O₂
- d) 4-9 liters of O₂

Q.10. Full form of COPD is:

- a) Chronic obstructive pulmonary disease
- b) Complete obstruction pulmonary disease
- c) Chronic obstruction pulmonary dyspnoea
- d) Chronic obstructive pulmonary distress

Section – B

04X04 = 16 Marks

Q.1. Define breathing. write down the types of breathing.

Breathing

The breath is a metabolic process, which supplies all our cells with oxygen. The breath is also a fine indicator of physical and psychological changes. It responds to every movement, every touch, every thought and every feeling. It is thus an expression of all physical, mental, and spiritual processes in man, that is, expression of his totality. Tensions, maladjustments and mental conflicts often make the breath flat and cramped. Breathing is life. To be free to breathe freely means to be free from pressure and strain, to feel unhappy and to move. Breathing is primarily unconscious. Newborn babies usually breathe independently. Breathing is one of the few life activities in which the human being is largely independent from birth. Only in the case of changes will one become aware of breathing. Changes in breathing quickly lead to anxiety; Dyspnoea can even put a person in death. By breathing, the body is able to exchange gases with the environment. The oxygen that is important for all life processes is absorbed via the lung and the carbon dioxide CO₂ (metabolic waste product) is released. Heart, vessels, and blood ensure transport. The activity of the heart and blood vessels thus supplement breathing. Therefore, a small disorder in the cardiopulmonary system can strongly influence human breathing is one of the vital functions.

Types of Breathing

Breast Breathing	Abdominal Breathing
In the case of breast breathing, the inspiration mainly depends on the intermediate rib muscle. The chest is visible.	In the case of the abdominal breathing, mainly the diaphragm takes over the respiratory work. The abdominal breathing leads to a deep and calm breathing. However, the upper regions of the lung are not sufficiently aerated.



Q.2. What do you mean pneumonia prophylaxis?

The taking of prophylactic measures involves the following steps:

- Realizing Risks
- Assess the hazard
- Plan measures
- Perform measures
- Evaluate the result of the measures
- Realizing Risks
- Patients are particularly vulnerable to pneumonia
- with insufficient lung ventilation (eg, pain-induced breathing, reduced general condition, bed rest),
- with increased accumulation of secretion in the respiratory tract (eg bronchitis, severe smokers or smokers),
- with descending infections (eg oral thrush, deficient oral hygiene),
- that aspirate (eg, humans after apoplexy)
- Assessment of Hazards
- Pneumatic scales are used to assess the risk of pneumonia. The assessment is carried out by a qualified staff member.
- Planning Measures
- The measures are planned individually according to the risk of pneumonia and the resources of the patient. These measures include:
 - For people with insufficient lung ventilation: early mobilization, respiratory stimulation, breathing support, respiratory training / respiratory gymnastics.
 - Patients with increased secretion collection: retraction, wrapping, inhalation, high fluid intake (mucolytic teas), cough assistance, drainage.
 - For people with descending infections: oral and nasal care, mucosal examination.
 - Patients with aspiration hazard: Aspiration prophylaxis.
- Execute Measures
- The implementation of the individual measures has already been described. As always, precise documentation is part of the process.
- Evaluation of the Results
- In order to evaluate the success or failure of the selected measures, it is important to assess the risk once again by means of a breathing scale and to plan further measures accordingly. This step is usually carried out by a qualified nurse.

Q.3. Define lung embolism. Write down the eight symptoms of lung embolism?

Lung Embolism

Pulmonary embolism is defined as the obstruction of the pulmonary artery or one of its branches by material (eg. Thrombus, tumor, air, or fat) that originated elsewhere in the body.



Symptoms

- Small embolisms are mostly symptomless
- Large embolism:
- Sudden dyspnea
- Cyanosis
- Respiratory-dependent thoracic pain
- Anxiety
- Cold sweat
- Cough
- Possibly with bloody sputum
- Tachycardia
- Stuck neck veins
- Diagnosis
- Anamnesis

Q.4 Write down the complication of oxygen administration?

Complication of oxygen administration

- Oxygen induced hypoventilation
- Oxygen toxicity / O₂ narcosis
- Absorption atelectasis
- Retinopathy
- Drying of mucus membranes
- Infection
- Fire hazards

Section – C

04X06 = 24 Marks

Q.1. Define anxiety. Write down the four cause, symptom and categories of anxiety.

Fear or anxiety is a feeling that often occurs in crisis situations. The feeling of fear is linked to uncertainty, constraint, and despair. It can be weak and temporary, but also very pronounced and persistent. Anxiety can be so strong that the control of the will and mind of a person turns off. It is called panic. The causes of this feeling can be unspecific and unknown to the patient. Emotions such as guilt, shame, rage or helplessness can also cover an existing fear.

Anxiety is divided into four categories

1. mild anxiety,
2. moderate anxiety,
3. severe anxiety and
4. panic.



Causes

There are many very different causes for this feeling: anxiety often comes up with new situations that the affected person does not feel fit for. There are age and developmental anxieties that are quite normal. A common fear is that of a loss (e.g., a person, health, part of a body, workplace). Many sick people are afraid not to be able to control themselves or to be a burden for their family. Many patients feel an immense fear of dying. There are also people who cannot tell the exact cause of their anxiety.

Symptoms

- Excessive worry
- Irritability
- Sleep disturbance
- Poor concentration
- Restlessness
- Muscles tension
- Fatigue

Q.2. What do you mean tuberculosis? Write down the cause, symptom and therapy of tuberculosis?

Tuberculosis

It is the most prevalent communicable infection disease. Usually involves lungs but may effect other organs or tissues in body.

Causes

Mycobacterium

tuberculosis Poor

hygiene

Reduce immune status

Sign and symptom

- Productive cough
- Fever
- Night sweats
- Weight loss
- Hemoptysis
- Pleuritic pain

Therapy

- DOTS (Directly observed therapy short course)
- Detection through sputum smear microscopy of TB suspects.
- **month treatment**
- Regular supply of anti- TB drugs
- Reporting system to evaluate the treatment outcomes.



Q.3. Define Bronchial asthma. Write down the four causes and therapy in asthma attack patient.

Bronchial Asthma

A chronic lung disorder that is marked by recurring episodes of airway obstruction (bronchospasm) manifested by laboured breathing accompanied especially by wheezing and coughing and by a sense of constriction in the chest, and that is triggered by hyper reactivity to various stimuli.

Causes

Depending on the trigger, a distinction is made between an allergic asthma (exogenous) and a non-allergic asthma (endogenous).

Allergic asthma:

- Pollen
- House dust (mites)
- Feathers
- Animal hair
- Medicines
- Non-allergic asthma: This form of asthma is more common.
- Asthma attacks can be triggered by respiratory infections
- physical exertion
- Cold air
- Stress
- Inhalation of respiratory tract substances (eg tobacco smoke, exhaust fumes).
- Symptoms
- Cough
- Wheezing
- Difficulty sleeping
- Hiccups
- Shortness of breathing
- Nasal congestion
- Rapid pulse
- Fatigue

Therapy

- Asthma therapy is a long-term treatment.
- It is important to practice various breathing exercises and breathing techniques to prevent airway constriction (eg, lip brake, slow inhalation with subsequent air arrest) and corresponding relieving body holdings (eg carriage seat).



In case of an attack

Do not leave the patient alone and trigger the alarm so that you can get help quickly. Various medicines are administered to the patient, eg bronchospasmolytics as aerosols or intravenously and glucocorticoids as inhalation, orally or intravenously. It may be necessary to have an intensive medical care, in which the patient can be intubated and ventilated. Ensure that the body is as upright as possible, which makes breathing easier. Open tight clothing and direct the patient to quiet, deep breathing with the lip brake. As soon as possible, the patient should drink enough (if necessary, liquid can also be delivered via infusion).

Q.4. Define pneumonia. Write down the four causes and symptom of pneumonia.

Pneumonia

Pneumonia is a mostly acute infection of the lung tissue. And pneumonia is an inflammation of the parenchyma in the lung is known as pneumonia.

Causes / Risk Factors

Depending on the cause, different types of pneumonia are distinguished:

- Bacteria pneumonia
- Parasites pneumonia
- Virus pneumonia
- Aspiration pneumonia
- long-term smokers

A consistently performed pneumonia prophylaxis (see consequences for healthcare) can in many cases prevent the development of a pneumonia.

Symptoms

- productive cough
- Fever
- pain in breathing
- short of breath
- purulent coughs
- yellowish or greenish sputum

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1108

Set B

Time: 2 Hours

Course Name: Support Breathing

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Maximum duration during the suction procedure is:

- | | |
|--------------|--------------|
| a) 10 Second | b) 15 Second |
| c) 25 Second | d) 12 Second |

Q.2. Which of these body systems is involved in the removal of carbon dioxide?

- | | |
|-----------------------|------------------------|
| a) Digestive system | b) Urinary system |
| c) Respiratory system | d) Reproductive system |

Q.3. Dyspnea is often connected is with:

- | | |
|--------------------|------------|
| a) Suffocation | b) Anxiety |
| c) Unconsciousness | d) Fatigue |

Q.4. The lung function test is determined by:

- | | |
|---------------------|---------------|
| a) Tonometer | b) Spirometer |
| c) Sphygmomanometer | d) Barometer |

Q.5. The most common cause of Asthma is:

- | | |
|---------------------------|------------------------|
| a) Allergy | b) Microbial infection |
| c) Pulmonary hypertension | d) Pneumothorax |

Q.6. A pulmonary infection is located inside the:

- | | |
|----------|----------|
| a) Brain | b) Heart |
| c) Lungs | d) Nails |

Q.7. Which respiratory sound produce during sleep?

- | | |
|------------|-----------------|
| a) Stridor | b) Rattle noise |
| c) Snoring | d) Moisture |

Q.8. The lack of oxygen in the tissues is known as:

- | | |
|--------------|-------------|
| a) Anoxaemia | b) Anoxia |
| c) Dyspnoea | d) Asphyxia |



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Q.9. COPD stands for-

- a) Chronic obstructive pulmonary disease
- b) Complete obstruction pulmonary disease
- c) Chronic obstruction pulmonary dyspnoea
- d) Chronic obstructive pulmonary distress

Q.10. What is the full form of "DOTS"?

- a) Directly observed therapy short course
- b) Direct obsessive therapy short course
- c) Direct obese treat symptom
- d) Direct observed therapy system

Section – B

04X04 = 16 Marks

Q.1. Describe the types of breathing.

Q.2. Define sputum. Write down the deviations of sputum.

Q.3. What do you mean by "lip brake"?

Q.4. Define the chronic bronchitis. Write down the symptoms of chronic bronchitis.

Section – C

04X06 = 24 Marks

Q.1. Define bronchial Asthma. Explain the causes, symptoms and diagnosis of bronchial Asthma.

Q.2. Define COPD. Write down the four cause and symptom of COPD.

Q.3. Explain the ways of O₂ administration. Write down the complication of O₂ administration.

Q.4. Define lung embolism. Write down the causes, symptoms and therapy of lung embolism.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1108

Answer Key

Time: 2 Hours

Course Name: Support Breathing

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Section – A

10X01 = 10 Marks

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| c) Lungs | d) Nails |

Q.7. Which respiratory sound produce during sleep?

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|------------|-----------------|
| a) Stridor | b) Rattle noise |
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|--------------|-------------|
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| c) Dyspnoea | d) Asphyxia |



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Q.9. COPD stands for:

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- b) Complete obstruction pulmonary disease
- c) Chronic obstruction pulmonary dyspnoea
- d) Chronic obstructive pulmonary distress

Q.10. What is the full form of "DOTS"?

- a) **Directly observed therapy short course**
- b) Direct obsessive therapy short course
- c) Direct obese treat symptom
- d) Direct observed therapy system

Section – B

04X04 = 16 Marks

Q.1. Describe the types of breathing.

Types of Breathing

Breast Breathing	Abdominal Breathing
In the case of breast breathing, the inspiration mainly depends on the intermediate rib muscle. The chest is visible.	In the case of the abdominal breathing, mainly the diaphragm takes over the respiratory work. The abdominal breathing leads to a deep and calm breathing. However, the upper regions of the lung are not sufficiently aerated.

Q.2. Define sputum. Write down the deviations of sputum.

Sputum

Sputum is the ejaculated bronchial secretion. In healthy people, the production of mucus is so small that it does not appear. There are deviations in quantity, colour, consistency, concentration and smell, which usually indicate a pathological cause.

Deviation	Description	Pathological Causes
Amount	Varies depending on illness from little to two liters per day.	For example, bronchitis, cystic fibrosis
Colour	It varies according to the main components: sputum is whitish Purulent sputum is greenish-yellowish Bloody sputum is light red, reddish or rusty brown	E.g. whitish: bronchitis greenish-yellowish: pneumonia Reddish: bronchial carcinoma
Consistency	The consistency distinguishes between foamy, thin liquid, slimy, glassy.	These characteristics can not be unambiguously attributed to a specific disease pattern.
Content	Ingestion can be mucus, saliva, pus, blood, tissue, food residues, bacteria, fungi.	E.g. A pus in pneumonia A blood and tumor cells in bronchial carcinoma



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Odor	Normally sputum has no smell, due to bacterial decomposition and / or tissue decay, it can smell smelly and foul.	For example, tissue decay in bronchial carcinoma
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Q.3. What do you mean by "lip brake"?

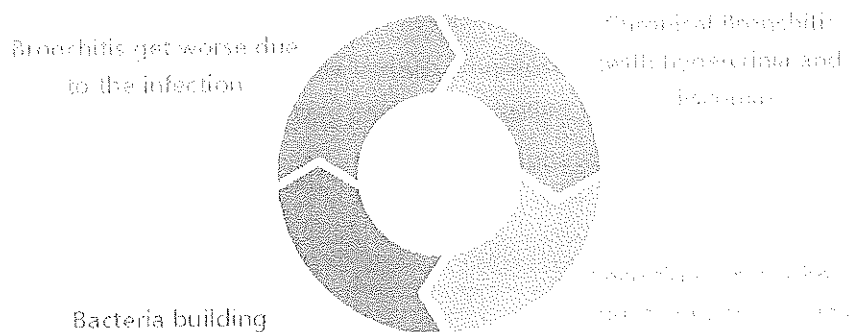
The "Lip Brake":

The lip brake is a special breathing technique, which should be used mainly by patients with existing respiratory diseases and the associated temporary dyspnea eg: in asthma bronchial. Inhale slowly and deeply through the nose. Exhalation is through the mouth through the half-closed lips. By this procedure, a slight, sustained pressure is maintained within the respiratory tract, which counteracts respiratory distress and an unproductive cough.

Q.4 Define chronic bronchitis. Describe the symptoms of chronic bronchitis.

Chronic bronchitis is inflammation (swelling) and irritation of the bronchial tubes. These tubes are the airways that carry air to and from the air sacs in your lungs. The irritation of the tubes causes mucus to build up.

Chronical Bronchitis



Symptoms

Sputum: The sputum is usually tenacious and whitish. Cough in the morning is often referred to as "smoking cough".

Respiratory distress: The oxygen intake is disturbed, at the beginning of the disease occurs
Dyspnea:

Dyspnea, later also Dyspnea at rest

Therapy

The most important therapy is the smoke stop.

Medicines do not cure the COPD but can alleviate the symptoms. Bronchial dilating drugs, so-called bron- chospasmolytics.



Section – C

04X06 = 24 Marks

Q.1. Define bronchial Asthma. Write down the four causes, symptoms and diagnosis of bronchial asthma.

Bronchial Asthma

A chronic lung disorder that is marked by recurring episodes of airway obstruction (bronchospasm) manifested by laboured breathing accompanied especially by wheezing and coughing and by a sense of constriction in the chest, and that is triggered by hyper reactivity to various stimuli.

Causes

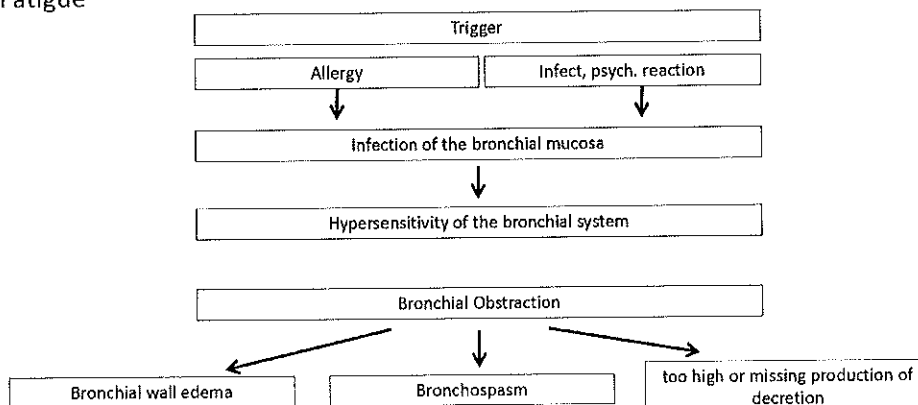
Depending on the trigger, a distinction is made between an allergic asthma (exogenous) and a non-allergic asthma (endogenous).

Allergic asthma:

- Pollen
- House dust (mites)
- Feathers
- Animal hair
- Medicines
- Non-allergic asthma: This form of asthma is more common.
- Asthma attacks can be triggered by respiratory infections
- physical exertion
- Cold air
- Stress
- Inhalation of respiratory tract substances (eg tobacco smoke, exhaust fumes).

Symptoms

- Cough
- Wheezing
- Difficulty sleeping
- Hiccups
- Shortness of breathing
- Nasal congestion
- Rapid pulse
- Fatigue





Diagnosis

- History
- Auscultation of the lungs in order to hear any prolonged exhalation sounds with hum, whistles and gusts
- Lung function test
- Thoracic X-ray to exclude other diseases, such as chronic bronchitis
- Study of Sputum
- Electrocardiogram: this is used to check how strongly the right heart is affected
- Allergy Test: Skin tests can show the presence or absence of allergies

Q.2. Define COPD. Write down the four cause and symptom of COPD.

Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory lung disease that causes obstructed airflow from the lungs. Symptoms include breathing difficulty, cough, mucus (sputum) production and wheezing.

Chronic obstructive pulmonary diseases include:

- Chronic-obstructive bronchitis
- bronchial asthma
- Pulmonary emphysema
- COPD is often referred to as "smoking lung".

Causes

- Long-term smoking / passive smoking
- inhalation of pollutants
- Occupational exposure
- Air pollution

Symptom

- Shortness of breath, especially during physical activities
- Wheezing
- Chest tightness
- A chronic cough that may produce mucus (sputum) that may be clear, white, yellow or greenish
- Frequent respiratory infections
- Lack of energy
- Unintended weight loss (in later stages)
- Swelling in ankles, feet or legs



Q.3. Explain the ways of O₂ administration. Write down the complication of O₂ administration.

Ways of Administration

Oxygen can be administered in various ways. Depending on the application form, a lower or higher oxygen concentration can be achieved. The prescription of the number of liters of O₂ to be received by a patient is expressed in flow

Nasal O₂ tube

It is the most common form of administration and is inserted into the nasal opening with a foam rubber pad. It is inserted approximately 1 cm and fixed by the foam rubber pad. Via nose are max. 1-4 liters of O₂.

Oxygen goggles: The approximately 1 cm long inflow glands are inserted into both nostrils, the loops lie like eyeglasses behind the ears and are reunited under the chin. Via oxygen spectacles, max. 1-6 l / min. Is administered.

Oxygen mask

Loosely placed on the nose and mouth and attached with a rubber band at the back. The exhaled air escapes through lateral holes in the mask. The mask allows a high O₂ dose of 5-10 l / min. The mask prevents speech and makes it impossible to eat.

Complication of oxygen administration

- Oxygen induced hypoventilation
- Oxygen toxicity / O₂ narcosis
- Absorption atelectasis
- Retinopathy
- Drying of mucus membranes
- Infection
- Fire hazards

Q.4. Define lung embolism. Write down the causes, symptoms and therapy of lung embolism.

Lung Embolism

Pulmonary embolism is define as the obstruction of the pulmonary artery or one of its branches by material (eg. Thrombus, tumor, air, or fat) that originated elsewhere in the body.

Causes and Risk Factors

- Orthopaedic operation
- Trauma
- Smoking
- Prolonged bed rest
- COPD
- Thrombus
- Risk factors for thrombus formation:
 - Changes in blood flow, eg bed rest, plaster, long-distance flight, etc.
 - Change of the vascular walls, eg after surgery
 - Changes in the blood composition, eg in congenital blood clotting disorders



Symptoms

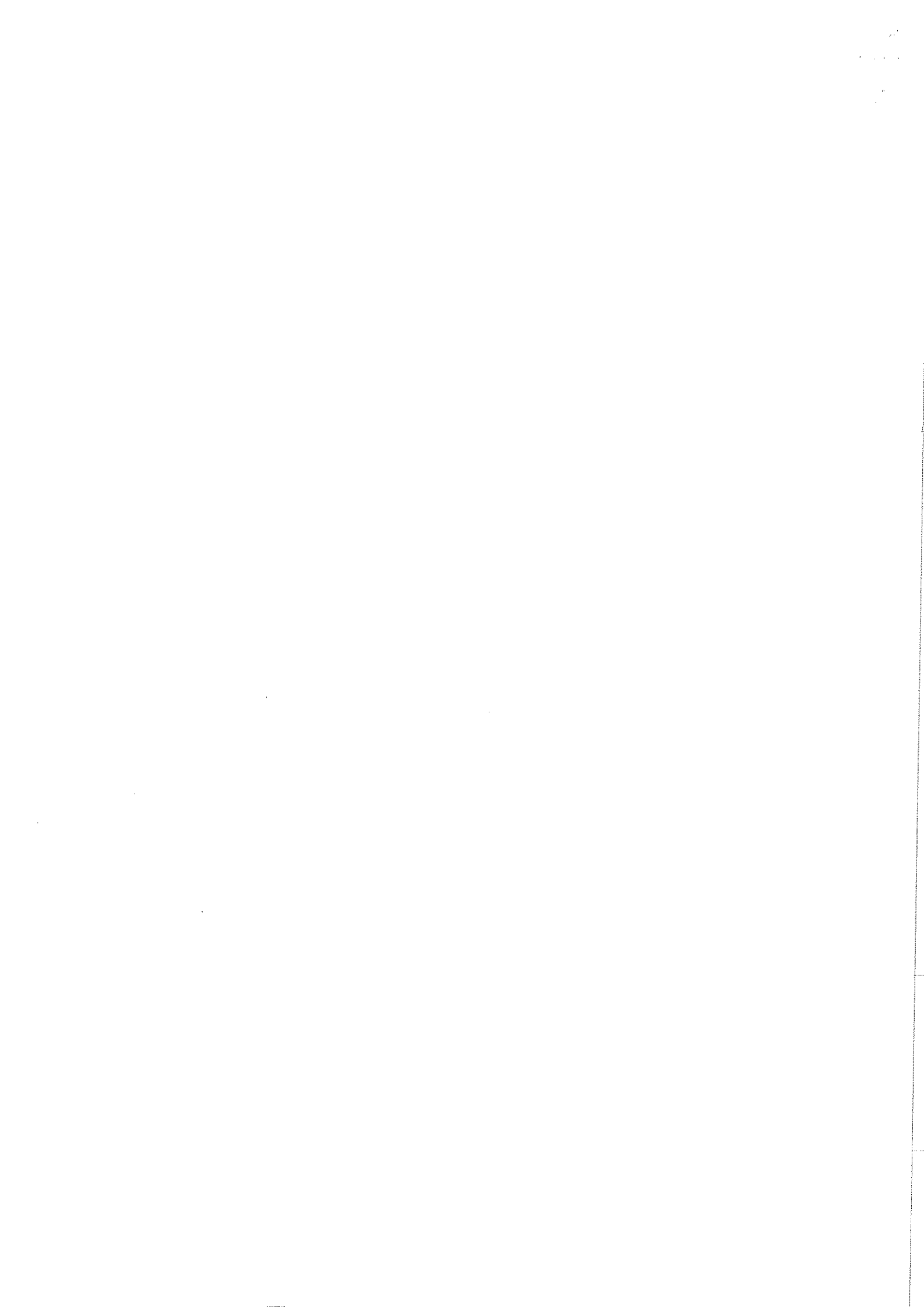
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- Large embolism:
- Sudden dyspnoea
- Cyanosis
- Respiratory-dependent thoracic pain
- Anxiety
- Cold sweat
- Cough
- Possibly with bloody sputum
- Tachycardia
- Stuck neck veins
- Diagnosis
- Anamnesis

Physical examination: pulse, blood pressure, heart and lung monitoring, visible signs of oxygen deficiency Computer tomography of the lung (a so-called spiral CT is made when suspected of pulmonary embolism) ECG, Laboratory, Blood gas analysis, determination of D-dimers in blood and perfusion scintillation help to establish a suspicious diagnosis and to record the condition of the patient.

Therapy

- Bed rest with high upper body to relief the heart. Oxygen via a mask or a nasal probe.
- Anticoagulation therapy: intravenous administration of heparin in order to prevent enlargement of the thrombus
- Medicines to support the circulation
- Lysetherapy: drug dissolution of the thrombus, e.g. by streptokinase or urokinase
- Embolectomy: operative removal of the embolus.

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embolus





BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester

End-Sem. Examination

Set - A

Course Code: SHP1109

Time: 2 Hours

Course Name: Assisting in Medical Procedure

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Asepsis is known as:

- | | |
|---------------------------|------------------------|
| a) Freedom from infection | b) Relief from fever |
| c) Relief from pain | d) Relief from allergy |

Q.2. What is position of the patient while giving the enema?

- | | |
|------------------|-----------------|
| a) Right lateral | b) Left lateral |
| c) Fowler | d) Supine |

Q.3. Full form of HCAI:

- | | |
|--------------------------------------|----------------------------------|
| a) Human care association infections | b) Health care active intact |
| c) Health care associated infections | d) Health care associated intact |

Q.4. Administration of enema is contraindicated in:

- | | |
|------------------------|-----------------------------------|
| a) Severe constipation | b) Bowel clearance before surgery |
| c) Paralytic ileus | d) Decrease body temperature |

Q.5. Which type of catheter is generally used for the client with urine retention?

- | | |
|-------------|-----------------------|
| a) Coude | b) Indwelling urinary |
| c) Straight | d) Three - way |

Q.6. How much temperature is required in autoclave machine during sterilization?

- | | |
|----------|----------|
| a) 122°C | b) 123°C |
| c) 121°C | d) 124°C |

Q.7. Indication for Foley catheterization include all except:

- | | |
|---------------------------------------|-------------------------------------|
| a) Collection of sterile urine sample | b) In preparation for a long travel |
| c) Measuring residual urine volumes | d) Urinary retention |

Q.8. The technique is used in case of surgical asepsis is:

- | | |
|------------------------|----------------------|
| a) Clean technique | b) Sterile technique |
| c) Isolation technique | d) None |



Q.9. Nylon suture is:

- a) Non absorbable suture
- b) Absorbable suture
- c) Semi absorbable suture
- d) Both a and b

Q.10. Full form of the CSSD:

- a) Center sterile store department
- b) Center sterile systemic department
- c) Center sterile store distribution
- d) Centre store sterile department

Section – B

04X04 = 16 Marks

- Q.1. What is the purpose of deal with sterile material?
- Q.2. Where is the use of the aseptic technique for a healthcare professional?
- Q.3. Define wound. Describe the suture (Stitches).
- Q.4 Write down the four uses of urinary catheter.

Section – C

04X06 = 24 Marks

- Q.1. Difference between the sterile and clean technique.
- Q.2. Define asepsis. Write down the general instruction of deal with sterile material.
- Q.3. Define urinary catheterization. Describe the type of urinary catheter.
- Q.4. Define enema. Write down the four indication and contraindication of enema administration.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester

End-Sem. Examination

Course Code: SHP1109

Answer key

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- a) **Non absorbable suture**
- b) Absorbable suture
- c) Semi absorbable suture
- d) Both a and b

Q.10. Full form of the CSSD:

- a) Center sterile store department
- b) Center sterile systemic department
- c) Center sterile store distribution
- d) **Central sterile supply department**

Section – B

04X04 = 16 Marks

Q.1. What is the purpose of deal with sterile material?

Deal with sterile material

It is the sterilization material is supply of the procedure site open the sterile material for use aseptic technique with receiving and distributing all surgical instruments and equipment as per well – delineated protocols and standardized procedures.

Purpose

- To help the nurse regarding open the sterile material.
- To prevent the infection during procedure.
- To maintain sterile area.

Q.2. Where is the use of the aseptic technique for a healthcare professional?

Aseptic techniques range from simple practices, such as using alcohol to sterilize the skin, to full surgical asepsis, which involves the use of sterile gowns, gloves, and masks. Healthcare professionals use aseptic technique practices in hospitals, surgery rooms, outpatient care clinics, and other healthcare settings. Using aseptic technique prevents the spread of infection by harmful germs. Healthcare professionals use aseptic technique when they are:

- performing surgical procedures
- performing biopsies
- dressing surgical wounds or burns
- suturing wounds
- inserting a urinary catheter, wound drain, intravenous line, or chest tube
- administering injections
- using instruments to conduct a vaginal examination
- delivering babies



Q.3. Define wound. Describe the suture (Stitches).

Wounds

The health care provider chooses the appropriate sterile technique and necessary supplies based on the clinical condition of the patient, the cause of the wound, the type of dressing procedure, the goal of care, and agency policy. Agency policy will determine the type of wound cleansing solution, but sterile normal saline and sterile water are the solutions of choice for cleansing wounds and should be at room temperature to support wound healing. For more complex wounds with delayed healing, antiseptic solutions such as povidone iodine or chlorhexidine may be used for cleansing based on agency policy and the recommendation of a wound clinician or physician.

Sutures (Stitches)

Sutures (stitches) are fine threads sewn through the skin to bring a wound together. Sutures are either permanent or absorbable (usually absorbed by the body within 4 to 8 weeks). Absorbable sutures, which do not require removal, are used to close incisions of the mouth, tongue, and genitals or deep, multilayered lacerations. Nylon and other nonabsorbable sutures should be removed by your health care provider.

Q.4 Write down the four uses of urinary catheter.

Uses of Urinary Catheter

A urinary catheter is usually used in people who have difficulty passing urine naturally. It can also be used to empty the bladder before or after surgery and to help perform certain tests. Specific reasons include:

- to allow urine to drain if you have an obstruction in the tube that carries urine out of the bladder (urethra) – for example, because of scarring or prostate enlargement.
- to allow you to urinate if you have bladder weakness or nerve damage which affects your ability to pee.
- to drain your bladder during childbirth, if you have an epidural anaesthetic.
- to drain your bladder before, during and/or after some types of surgery, such as operations on the womb, ovaries or bowels.
- to deliver medication directly into the bladder, such as during chemotherapy for bladder cancer.
- as a treatment for urinary incontinence when other types of treatment haven't worked.

Section – C

04X06 = 24 Marks

Q.1. Difference between the sterile and clean technique.

Aseptic technique vs. clean technique

Aseptic technique and clean technique are two closely related healthcare practices that both aim to keep people safe from infection. The aim of using aseptic technique is to eliminate germs, which are disease-causing microorganisms. Clean technique focuses on reducing the number of microorganisms in general.



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Healthcare professionals learn both aseptic and clean techniques and use them in different situations. They will use aseptic technique during surgical operations or when inserting a foreign object, such as a catheter, into a person's body.

Clean technique is often sufficient for long-term care, in-home care, and some outpatient clinical settings. Healthcare professionals use clean technique for people who are not at high risk of infection. For example, they may use clean technique when changing the dressing on a wound that is healing.

Some examples of clean technique practices include thorough handwashing, wearing gloves, and maintaining a clean environment or work area. Clean technique uses non-touch practices. Non-touch practices prohibit healthcare professionals from touching key parts of objects, such as syringe tips and the inside of sterile dressings, even when they are wearing gloves. The medical community define clean technique as a modified form of aseptic technique, as maintaining proper hygiene and a clean environment will help achieve asepsis.

Q.2. Define asepsis. Write down the general instruction of deal with sterile material.

Asepsis

Asepsis or aseptic means the absence of germs, such as bacteria, viruses, and other microorganisms that can cause disease. Healthcare professionals use aseptic technique to protect patients from infection. Aseptic technique is a standard healthcare practice that helps prevent the transfer of germs to or from an open wound and other susceptible areas on a patient's body.

General instruction of deal with sterile material

Asepsis refers to the absence of infectious material or infection. Surgical asepsis is the absence of all microorganisms within any type of invasive procedure. Sterile technique is a set of specific practices and procedures performed to make equipment and areas free from all microorganisms and to maintain that sterility. In the literature, surgical asepsis and sterile technique are commonly used interchangeably, but they mean different things. Principles of sterile technique help control and prevent infection, prevent the transmission of all microorganisms in a given area, and include all techniques that are practised to maintain sterility.

Sterile technique is most commonly practised in operating rooms, labour and delivery rooms, and special procedures or diagnostic areas. It is also used when performing a sterile procedure at the bedside, such as inserting devices into sterile areas of the body or cavities (e.g., insertion of chest tube, central venous line, or indwelling urinary catheter). In health care, sterile technique is always used when the integrity of the skin is accessed, impaired, or broken (e.g., burns or surgical incisions). Sterile technique may include the use of sterile equipment, sterile gowns, and gloves.

Q.3. Define urinary catheterization. Describe the type of urinary catheter.

Urinary Catheterization

Urinary catheterization is a procedure used to drain the bladder and collect urine, through a flexible tube called a catheter. Urinary catheters are usually inserted by doctors or nurses in hospital or the community. The catheter usually remains in the bladder, allowing urine to flow through it and into a drainage bag. Depending on the type of catheter you have and why it's being used, the catheter may be removed after a few minutes, hours or days, or it may be needed for the long term.



Types of Urinary Catheter

There are 2 main types of urinary catheter:

- **intermittent catheters** – catheters that are temporarily inserted into the bladder and removed once the bladder is empty
- **indwelling catheters** – catheters that remain in place for many days or weeks and are held in position by a water-filled balloon in the bladder.

Q.4. Define enema. Write down the four indication and contraindication of enema administration.

Enema administration

An enema administration is a technique used to stimulate stool evacuation. It is a liquid treatment most commonly used to relieve severe constipation. The process helps push waste out of the rectum when you cannot do so on your own.

Indications

Enemas may be prescribed for the following reasons.

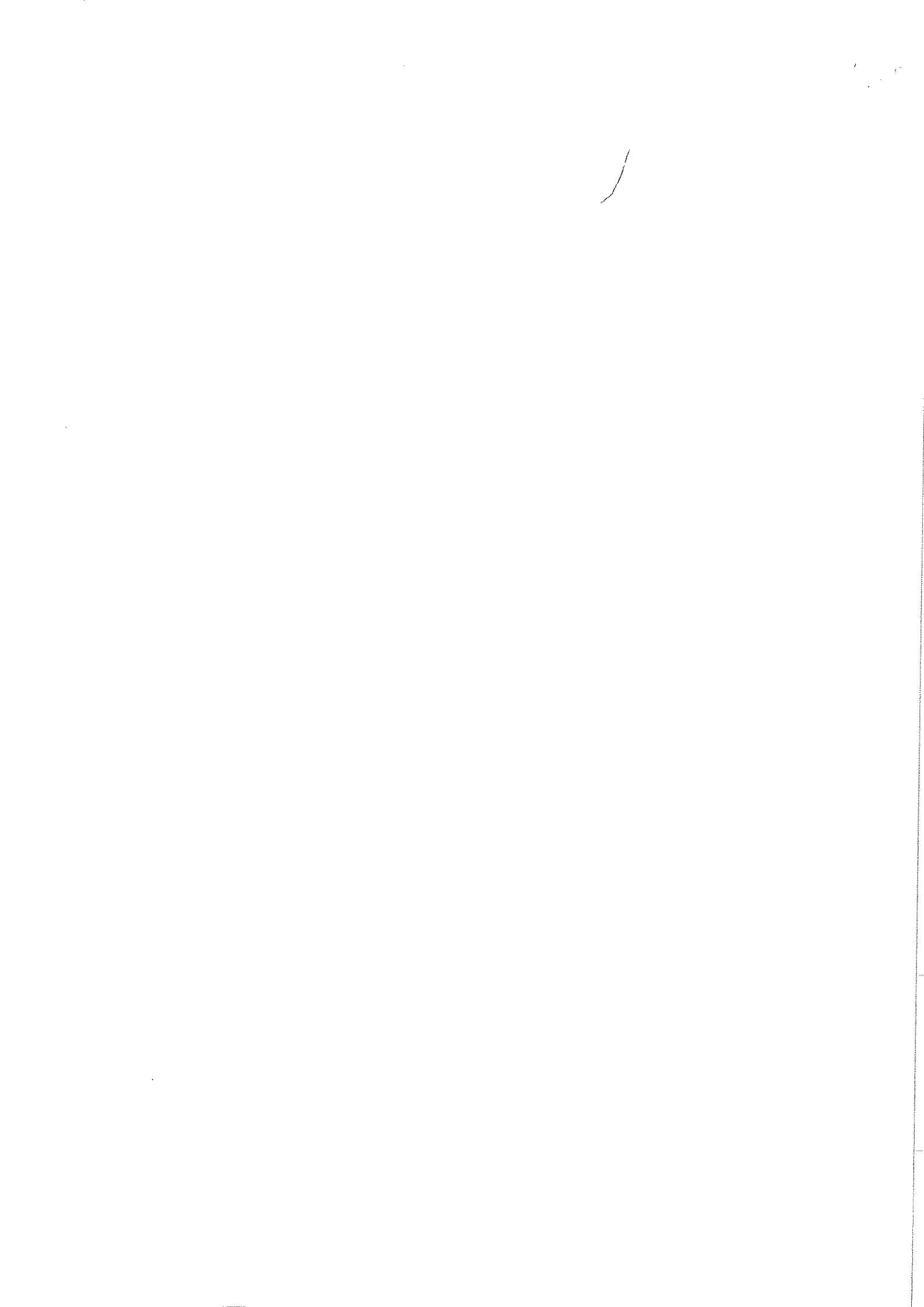
- To clean the lower bowel before surgery, X-ray examination of the bowel using contrast medium or endoscopy examination.
- To treat severe constipation when other methods have failed.
- To introduce medication into the system.
- To soothe and treat irritated bowel mucosa.
- To decrease body temperature (due to contact with the proximal vascular system)
- To stop local haemorrhage.
- To reduce hyperkalaemia (calcium resonium).
- To reduce portal systemic encephalopathy (phosphate enema).

Contraindications

Enemas are contraindicated under the following circumstances.

- In paralytic ileus.
- In colonic obstruction.
- Where the administration of tap water or soap and water enemas may cause circulatory overload, water intoxication, mucosal damage and necrosis, hyperkalaemia and cardiac arrhythmias.
- Where the administration of large amounts of fluid high into the colon may cause perforation and haemorrhage.
- Following gastrointestinal or gynaecological surgery, where suture lines may be ruptured (unless medical consent has been given).
- Frailty.
- Proctitis.
- The use of microenemas and hypertonic saline enemas in patients with inflammatory or ulcerative conditions of the large colon.
- Recent radiotherapy to the lower pelvis unless medical consent has been given.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester

End-Sem. Examination

Course Code: SHP1109

Set - B

Time: 2 Hours

Course Name: Assisting in Medical Procedure

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Tissue adhesive known as:

- | | |
|---------------------|---------------------|
| a) Staples adhesive | b) Wound adhesive |
| c) Skin adhesive | d) Plaster adhesive |

Q.2. What is position of the patient while giving the catheterization?

- | | |
|---------------------|-----------------|
| a) Dorsal recumbent | b) Left lateral |
| c) Fowler | d) Supine |

Q.3. What is included in HCAI?

- | | |
|------------------------------------|------------------------------------|
| a) Clostridium difficile intestine | b) Suturing wound |
| c) Clostridium difficult infection | d) Clostridium difficile infection |

Q.4. The surgical mask is worn primarily for the protection of the.....

- | | |
|-------------|-----------------|
| a) Visitors | b) Attender |
| c) Patient | d) All of above |

Q.5. Indwelling catheter is known as:

- | | |
|--------------------------|--------------------------|
| a) Single lumen catheter | b) Double lumen catheter |
| c) K-90 catheter | d) Three lumen catheter |

Q.6. How much temperature is required in autoclave machine during sterilization?

- | | |
|----------|----------|
| a) 122°C | b) 123°C |
| c) 121°C | d) 124°C |

Q.7. When are absorb absorbable suture?

- | | |
|--------------------------|-------------------------|
| a) Within 4 to 8 weeks | b) Within 4 to 14 weeks |
| c) Within 10 to 12 weeks | d) Only 2 weeks |

Q.8. The technique is used in case of surgical asepsis is:

- | | |
|------------------------|----------------------|
| a) Clean technique | b) Sterile technique |
| c) Isolation technique | d) None |



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Q.9. Which type of strips used in the edges of an incision?

- a) Steri-strips
- b) Absorbable strips
- c) Staples strips
- d) Skin adhesive

Q.10. Full form of the CSSD:

- a) Central sterile store department
- b) Central sterile systemic department
- c) Central sterile supply department
- d) Centre store sterile department

Section – B

04X04 = 16 Marks

Q.1. Write down the four indication of enema.

Q.2. Difference between the intermittent and indwelling catheter.

Q.3. What do you understand clean technique in home care?

Q.4 Define asepsis. When you used to healthcare professional's aseptic technique?

Section – C

04X06 = 24 Marks

Q.1. Write the name of instrument used for the catheterization tray. Describe the general instruction of deal with sterile material.

Q.2. Define wound. Elaborate the staples suture and skin adhesives.

Q.3. Define urinary catheterization. Write down the risk and prevention infections of urinary catheter.

Q.4. Define enema. Write down the eight contraindication of enema administration.

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Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester

End-Sem. Examination

Course Code: SHP1109

Answer key

Time: 2 Hours

Course Name: Assisting in Medical Procedure

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Tissue adhesive known as:

- | | |
|---------------------|---------------------|
| a) Staples adhesive | b) Wound adhesive |
| c) Skin adhesive | d) Plaster adhesive |

Q.2. What is position of the patient while giving the catheterization?

- | | |
|---------------------|-----------------|
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| c) Fowler | d) Supine |

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- | | |
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|-------------------|----------------------|
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| c) Staples strips | d) Skin adhesive |

Q.10. Full form of the CSSD:

- a) Central sterile store department
- b) Central sterile systemic department
- c) Central sterile supply department**
- d) Centre store sterile department

Section – B

04X04 = 16 Marks

Q.1. Write down the four indication of enema.

Indications

Enemas may be prescribed for the following reasons.

- To clean the lower bowel before surgery, X-ray examination of the bowel using contrast medium or endoscopy examination.
- To treat severe constipation when other methods have failed.
- To introduce medication into the system.
- To soothe and treat irritated bowel mucosa.
- To decrease body temperature (due to contact with the proximal vascular system)
- To stop local haemorrhage.
- To reduce hyperkalaemia (calcium resonium).
- To reduce portal systemic encephalopathy (phosphate enema).

Q.2. Difference between the intermittent and indwelling catheter.

Types of Urinary Catheter

There are 2 main types of urinary catheter:

- **intermittent catheters** – catheters that are temporarily inserted into the bladder and removed once the bladder is empty
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Q.3. What do you understand clean technique in home care?

Clean technique is often sufficient for long-term care, in-home care, and some outpatient clinical settings. Healthcare professionals use clean technique for people who are not at high risk of infection. For example, they may use clean technique when changing the dressing on a wound that is healing.

Some examples of clean technique practices include thorough handwashing, wearing gloves, and maintaining a clean environment or work area. Clean technique uses non-touch practices. Non-touch practices prohibit healthcare professionals from touching key parts of objects, such as syringe tips and the inside of sterile dressings, even when they are wearing gloves. The



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medical community define clean technique as a modified form of aseptic technique, as maintaining proper hygiene and a clean environment will help achieve asepsis.

Q.4 Define asepsis. When you used to healthcare professional's aseptic technique?

Asepsis

Asepsis or aseptic means the absence of germs, such as bacteria, viruses, and other microorganisms that can cause disease. Healthcare professionals use aseptic technique to protect patients from infection. Aseptic technique is a standard healthcare practice that helps prevent the transfer of germs to or from an open wound and other susceptible areas on a patient's body.

Aseptic techniques range from simple practices, such as using alcohol to sterilize the skin, to full surgical asepsis, which involves the use of sterile gowns, gloves, and masks. Healthcare professionals use aseptic technique practices in hospitals, surgery rooms, outpatient care clinics, and other healthcare settings. Using aseptic technique prevents the spread of infection by harmful germs. Healthcare professionals use aseptic technique when they are:

- performing surgical procedures
- performing biopsies
- dressing surgical wounds or burns
- suturing wounds
- inserting a urinary catheter, wound drain, intravenous line, or chest tube
- administering injections
- using instruments to conduct a vaginal examination
- delivering babies

Section – C

04X06 = 24 Marks

Q.1. Write the name of instrument used for the catheterization tray. Describe the general instruction of deal with sterile material.

- Preparatory solution (eg, povidone-iodine or chlorhexidine)
- Sterile cotton balls
- Water-soluble lubrication gel
- Sterile drapes
- Sterile gloves
- Urethral catheter
- Prefilled saline syringe, 10 mL
- Urinometer connected to a collection bag (see the fourth image below)

General instruction of deal with sterile material

Asepsis refers to the absence of infectious material or infection. Surgical asepsis is the absence of all microorganisms within any type of invasive procedure. Sterile technique is a set of specific practices and procedures performed to make equipment and areas free from all microorganisms and to maintain that sterility. In the literature, surgical asepsis and sterile technique are commonly used interchangeably, but they mean different things. Principles of sterile technique help control and prevent infection, prevent the transmission of all microorganisms in a given area, and include all techniques that are practised to maintain sterility.



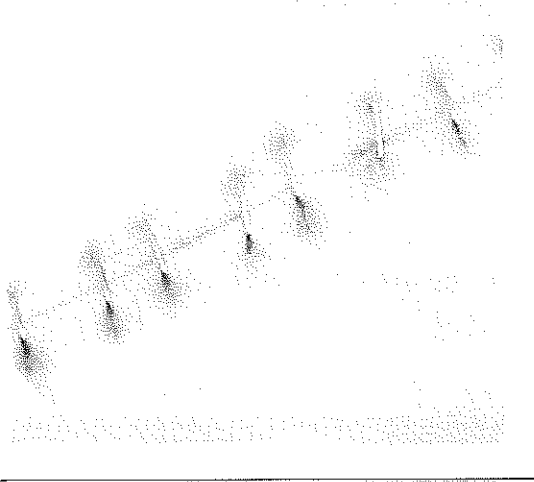

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Sterile technique is most commonly practised in operating rooms, labour and delivery rooms, and special procedures or diagnostic areas. It is also used when performing a sterile procedure at the bedside, such as inserting devices into sterile areas of the body or cavities (e.g., insertion of chest tube, central venous line, or indwelling urinary catheter). In health care, sterile technique is always used when the integrity of the skin is accessed, impaired, or broken (e.g., burns or surgical incisions). Sterile technique may include the use of sterile equipment, sterile gowns, and gloves.

Q.2. Define wound. Elaborate the staples suture and skin adhesives.

Wounds

The health care provider chooses the appropriate sterile technique and necessary supplies based on the clinical condition of the patient, the cause of the wound, the type of dressing procedure, the goal of care, and agency policy. Agency policy will determine the type of wound cleansing solution, but sterile normal saline and sterile water are the solutions of choice for cleansing wounds and should be at room temperature to support wound healing. For more complex wounds with delayed healing, antiseptic solutions such as povidone iodine or chlorhexidene may be used for cleansing based on agency policy and the recommendation of a wound clinician or physician.

<p>Staples</p> <p>Staples are metal clips that are used to close surgical incisions that have fairly straight edges. Medical staples are made of special metal and are not the same as office staples. They often provide the strongest closure. The amount of time they are left in depends upon the wound location and healing rate of the patient. Staples are usually removed at a doctor's office or hospital. There may be some localized redness around the staples for the first few days. If this redness increases, it may be a sign of a wound infection.</p>	
<p>Tissue or Skin Adhesives</p> <p>Tissue adhesives (also known as skin adhesives) are used to close wounds and may be used alone or with sutures. Your doctor will put a liquid film on the wound and let it dry. The film holds the edges of the wound together and also protects the wound from getting wet. You should leave the film on the skin until it falls off, usually in 5 to 10 days.</p>	

Q.3. Define urinary catheterization. Write down the risk and prevention infections of urinary catheter.

Urinary Catheterization

Urinary catheterization is a procedure used to drain the bladder and collect urine, through a flexible tube called a catheter. Urinary catheters are usually inserted by doctors or nurses in hospital or the community. The catheter usually remains in the bladder, allowing urine to flow



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through it and into a drainage bag. Depending on the type of catheter you have and why it's being used, the catheter may be removed after a few minutes, hours or days, or it may be needed for the long term.

Risks and potential Problems

The main problem caused by urinary catheters are infections in the urethra, bladder, or less commonly the kidneys. These types of infection are known as urinary tract infections (UTIs) and they usually need to be treated with antibiotics. Catheters can also sometimes lead to other problems, such as bladder spasms (like stomach cramps), leakages, blockages and damage to the urethra.

Preventing Infections and other Complications

Having a long-term urinary catheter increases your risk of developing urinary tract infections (UTIs), and can also lead to other problems, such as blockages. You will be advised about measures to take to minimise these risks, such as:

- Regularly washing your hands, body and catheter with warm water and soap – it's particularly important to clean your hands before and after touching your equipment.
- Ensuring you stay well hydrated – you should aim to drink enough fluids so that your urine stays pale.
- Preventing constipation – staying hydrated can help with this, as can eating high-fibre foods such as fruits, vegetables and wholegrain foods.
- Avoiding kinks in the catheter and making sure any urine collection bags are kept below the level of your bladder always.

Q.4. Define enema. Write down the eight contraindication of enema administration.

Enema administration

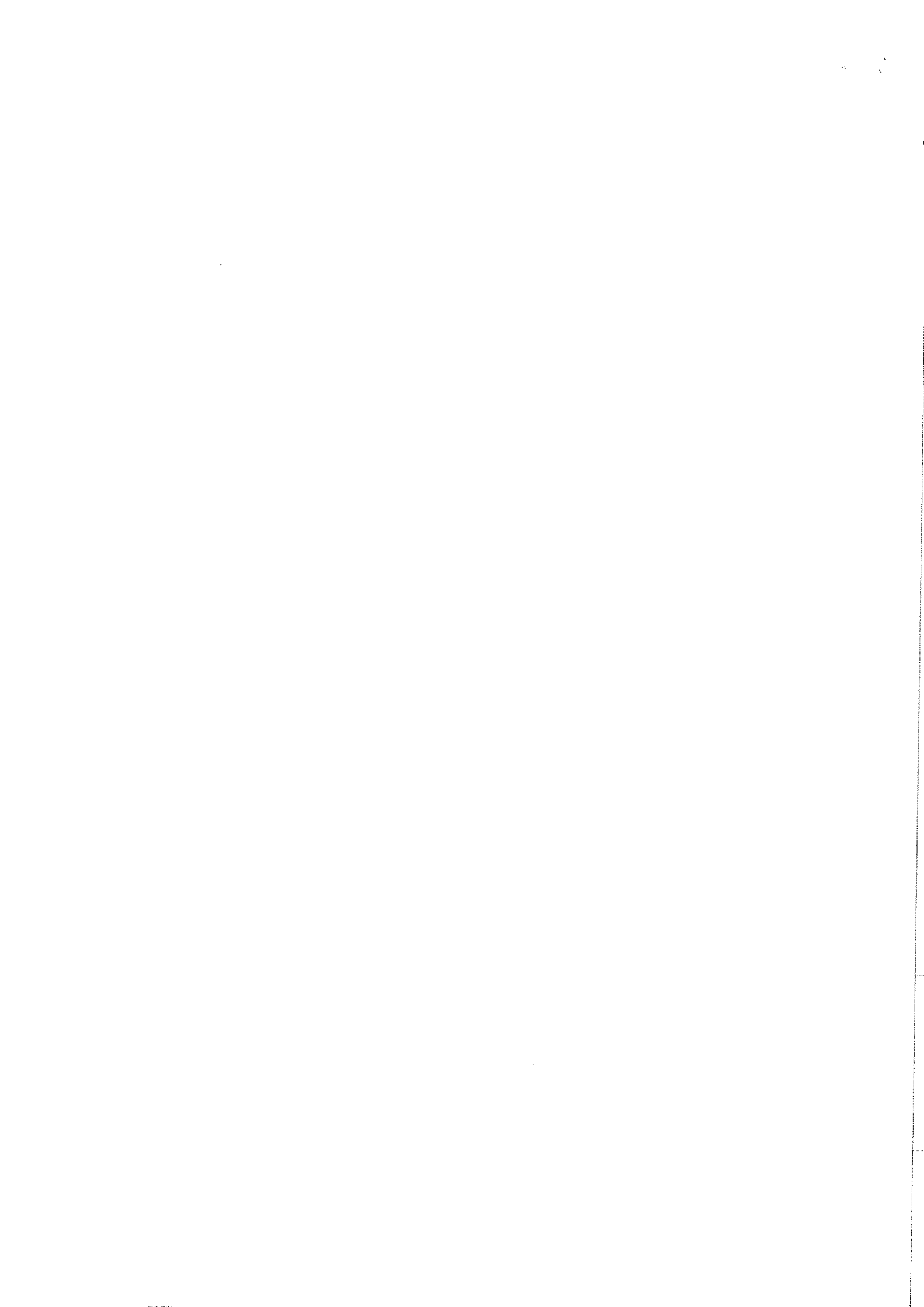
An enema administration is a technique used to stimulate stool evacuation. It is a liquid treatment most commonly used to relieve severe constipation. The process helps push waste out of the rectum when you cannot do so on your own.

Contraindications

Enemas are contraindicated under the following circumstances.

- In paralytic ileus.
- In colonic obstruction.
- Where the administration of tap water or soap and water enemas may cause circulatory overload, water intoxication, mucosal damage and necrosis, hyperkalaemia and cardiac arrhythmias.
- Where the administration of large amounts of fluid high into the ^{[[]]}colon may cause perforation and haemorrhage. ^{[[]]}
- Following gastrointestinal or gynaecological surgery, where suture lines may be ruptured (unless medical consent has been ^{[[]]}given). ^{[[]]}
- Frailty. ^{[[]]}
- Proctitis. ^{[[]]}
- The use of microenemas and hypertonic saline enemas in ^{[[]]}patients with inflammatory or ulcerative conditions of the large ^{[[]]}colon. ^{[[]]}
- Recent radiotherapy to the lower pelvis unless medical consent ^{[[]]}has been given.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: ^{SHP} 1110

Set-A

Time: 2 Hours

Course Name: Clinical Picture II

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Parkinson's disease is caused by:

- | | |
|--------------------------------------------------------|----------------------------------------|
| a) Hereditary factors | b) Death of brain cells due to old age |
| c) Impairment of dopamine producing cells in the brain | d) Demyelination of the nerve cells |

Q.2. The fasting blood sugar value is:

- | | |
|------------------|------------------|
| a) 70-110 mg/dl | b) 50-90 mg/dl |
| c) 120-180 mg/dl | d) 180-200 mg/dl |

Q.3. Full form of GABA:

- | | |
|-------------------------------|------------------------------|
| a) Gamma aminobutyric acid | b) Gamma amino basic acid |
| c) Gamma amnioticbutyric acid | d) Gama amylase butyric acid |

Q.4. The complaint of insulin secretion is noticed:

- | | |
|-----------------------|-----------------------|
| a) Type I diabetes | b) Type II diabetes |
| c) Secondary diabetes | d) Diabetes insipidus |

Q.5. Parkinson's disease patient often require assistance with walking because they:

- | | |
|----------------------------|------------------------------------|
| a) Forget how to take step | b) Do not notice safety problems |
| c) Have visual problems | d) Have shuffling walk and tremors |

Q.6. Which would you do when caring for epileptic seizure victim?

- a) Remove nearby object that might cause injuries
- b) Turn the patient on the side
- c) Insert a spoon in his mouth to prevent tongue bite
- d) Pinch the patient's nose to stop the seizure

Q.7. Patient with diabetes will need which item monitored on a more frequent basis:

- | | |
|-------------|------------------|
| a) Eyesight | b) Blood glucose |
| c) Urea | d) Heart rate |

Q.8. Which of the following is a specific investigation to detect seizures?

- | | |
|------------|-------------|
| a) CT Scan | b) MRI Scan |
| c) EEG | d) X-ray |



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Q.9. Early sign of Parkinson's disease is:

a) Tremors

b) Rigidity

c) Akinesia

d) Tachycardia

Q.10. During the tonic clonic seizures the tonic phase is characterized by:

a) Jerking of extremities

b) Confusion

c) Stiffening of the body

d) Loosing consciousness

Section – B

04X04 = 16 Marks

Q.1. Define Parkinson's. Describe the tremor.

Q.2. What do you mean neurotransmitter? Describe the bradykinesia.

Q.3. Write down the therapy (First Aid) of epilepsy.

Q.4. What do you mean type II diabetes mellitus?

Section – C

04X06 = 24 Marks

Q.1. Define epilepsy. Explain the generalized seizure.

Q.2. Consequences when taking care for people with Parkinson.

Q.3. Describe the pathology of Parkinson's disease.

Q.4. Difference between the Hyperglycemia and Hypoglycemia.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: 1110

Course Name: Clinical Picture II

Time: 2 Hours

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Parkinson's disease is caused by:

- | | |
|--------------------------------------------------------|----------------------------------------|
| a) Hereditary factors | b) Death of brain cells due to old age |
| c) Impairment of dopamine producing cells in the brain | d) Demyelination of the nerve cells |

Q.2. The fasting blood sugar value is:

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- | | |
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| c) Stiffening of the body | d) Loosing consciousness |

Section – B

04X04 = 16 Marks

Q.1. Define Parkinson's. Describe the tremor.

Parkinson

Parkinson's disease (PD) was first described by Dr. James Parkinson in 1817 as a "shaking palsy." It is a chronic, progressive neurodegenerative disease characterized by both motor and nonmotor features. The disease has a significant clinical impact on patients, families, and caregivers through its progressive degenerative effects on mobility and muscle control. The motor symptoms of PD are attributed to the loss of striatal dopaminergic neurons, although the presence of nonmotor symptoms supports neuronal loss in nondopaminergic areas as well. The term parkinsonism is a symptom complex used to describe the motor features of PD, which include resting tremor, bradykinesia, and muscular rigidity. PD is the most common cause of parkinsonism, although a number of secondary causes also exist, including diseases that mimic PD and drug-induced causes.

Tremor

Tremor, which often presents as the initial symptom, occurs in approximately two-thirds of PD patients. It typically starts in a mild and intermittent fashion. The usual course is an initial unilateral tremor, which progresses to bilateral involvement over the duration of the disease. The tremor of PD is usually described as a resting tremor of the hand (pill-rolling tremor), although it can be present in the lower limbs, toes, and jaws. Stressful situations or asking the patient to perform a mental task may exacerbate and worsen a PD tremor, whereas movement or sleep diminishes the symptoms. Younger patients may have inconsistent presentations or tremor only during periods of fatigue. Although resting tremor is the most common type of tremor in PD, some patients may present with action tremor, e.g., tremor manifested during activity. The diagnostic process is further complicated by the presence of mixed tremor, as well as by the fact that patients with benign essential tremor (BET) may develop a resting tremor later in their disease. Although tremor is common in PD, it is considered to be the least disabling of the motor features compared with the other cardinal features—rigidity and bradykinesia.

Q.2. What do you mean neurotransmitter? Describe the bradykinesia.

Neurotransmitters are chemical messengers that transmit a message from a nerve cell across the synapse to a target cell. The target can be another nerve cell, or a muscle cell, or a gland cell. They are chemicals made by the nerve cell specifically to transmit the message.

Bradykinesia

Bradykinesia is a core clinical motor feature of PD and has been defined as a reduction in the speed, gait, and amplitude of a repetitive action involving voluntary movements. Bradykinesia is the most common clinical feature observed in patients with PD and is considered to be a key diagnostic criterion. The disorder usually appears later than tremor, although in some cases it may be the initial symptom and tremor may never develop. A common clinical presentation



associated with this feature is difficulty getting started or initiating movements and a slow, shuffling gait. Patients with bradykinesia may also demonstrate hastening of their gait, in which their walking speed increases with small, rapid steps in an effort to "catch up" with their displaced center of gravity. Patients may also experience immobility associated with bradykinesia, typically when confronted by the need to turn or enter through a narrow door. Episodes of "freezing" are an extreme manifestation of PD and usually occur in advanced disease.

Q.3. Write down the therapy (First Aid) of epilepsy.

Therapy of epilepsy: -

First Aid:

- Rolling a person with an active tonic-clonic seizure onto their side and into the recovery position helps prevent fluids from getting into the lungs.
- Putting fingers, a bite block or tongue depressor in the mouth is not recommended as it might make the person vomit or result in the rescuer being bitten.
- If a seizure lasts longer than 5 minutes or if there are more than two seizures in an hour without a return to a normal level of consciousness between them, it is considered a medical emergency
- This may require
- medical help to keep the airway open and protected
- A nasopharyngeal airway may be useful for this.
- At home the recommended initial medication for seizure of a long duration is midazolam placed in the mouth.
- Diazepam may also be used rectally.
- In hospital, intravenous lorazepam is preferred

Diet:

- High-fat, low-carbohydrate, adequate-protein
- A gluten-free diet may decrease the frequency of seizures.

Other:

- Those who are sensitive to light may have success with using a small television
- Avoiding video games
- Wearing dark glasses

Q.4. What do you mean type II diabetes mellitus?

Diabetes mellitus type II

In type 2 diabetes (adult onset diabetes), the pancreas makes insulin, but it either doesn't produce enough, or the insulin does not work properly. Nine out of 10 people with diabetes have type 2. This type occurs most often in people who are over 40 years old but can occur even in childhood if there are risk factors present. Type 2 diabetes may sometimes be controlled with a combination of diet, weight management and exercise. However, treatment also may include oral glucose-lowering medications (taken by mouth) or insulin injections (shots).



Section – C

04X06 = 24 Marks

Q.1. Define epilepsy. Explain the generalized seizure.

Epilepsy

Epilepsy is a chronic medical disorder or condition, usually resulting in unpredictable, unprovoked recurrent seizures that affect a variety of mental and physical functions. It is one of the most common neurological diseases, about 50 million people worldwide. Epilepsy was one of the first brain disorders to be described. Through the ages, the strange behaviour caused by some seizures has led to the creation of numerous superstitions and prejudices.

A person is considered to have epilepsy when two or more unprovoked seizures occur that can't be explained by a medical condition such as fever or substance withdrawal. Seizures can be the result of a family tendency toward the disease, or they can occur after a brain injury, but the cause of epilepsy is largely unknown. Epileptic seizures are manifested by an abnormal, excessive, and hypersynchronous electrical discharge of neurons in the brain.

1. Generalized seizure: -

A generalized seizure occurs when both halves of the brain have epileptic activity. The patient's consciousness is lost while the seizure is in progress.

- a. Tonic-clonic seizures (previously known as grand mal seizures)- Perhaps the best known type of generalized seizure. They cause a loss of consciousness, body stiffness, and shaking.
- b. Absence seizures- Previously called petit mal seizures, these involve short lapses in consciousness where the individual appears to be staring off into space. Absence seizures often respond well to treatment
- c. Tonic seizures- Muscles become stiff, and the person may fall.
- d. Atonic seizures- A loss of muscle control causes the individual to drop suddenly.
- e. Clonic seizures- This is associated with rhythmic, jerking movements.

Q.2. Consequences when taking care for people with Parkinson.

Consequences for Caregivers

- For those affected, it is usually difficult to move around freely in society. For fear of a sudden blockade, for example, many people with Parkinson's disease are withdrawing.
- As a rule, the ability to think is not reduced in people with Parkinson's disease. They often need only longer to formulate their own thoughts and to express themselves. Likewise, they tend to struggle with new situations. This can also lead the patient into isolation.
- Depressive moods can also be the first sign and occur long before the physical symptoms. In addition, depressive moods can also be a reaction to the various symptoms.
- Nursing care for people with Parkinson's is a challenging task. The three main symptoms can be very different in their manifestation and change rapidly.
- Important in communicating with Parkinson's patients is patient listening. Since the symptoms of mimicry, gestures and vocal variations are absent from Parkinson's patients, for example, he cannot speak spontaneously. Everything can only be achieved by overcoming certain start-up difficulties. This demands a lot of sympathetic patience for the conversation partner.

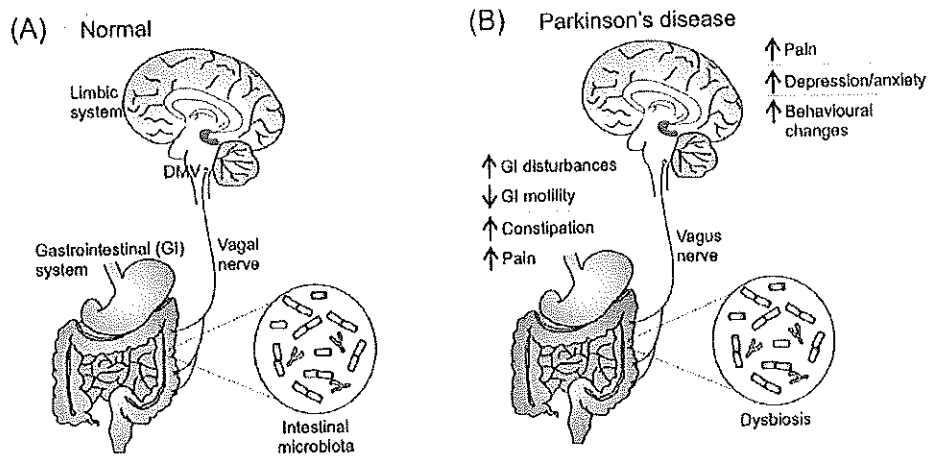


- It is also very helpful to set targets together. These are to be adapted to the constantly changing situations or the disease pattern.

Q.3. Describe the pathology of Parkinson's disease.

Pathology

PD is a disorder of the extrapyramidal system, which includes motor structures of the basal ganglia, and is characterized by the loss of dopaminergic function and consequent diminished motor function, leading to clinical features of the disease. Research in the late 1950s identified striatal dopamine depletion as the major cause of the motor symptoms of PD, although the presence of nonmotor features supports the involvement of other neurotransmitters of the glutamatergic, cholinergic, serotonergic, and adrenergic systems, in addition to the neuromodulators adenosine and enkephalins. Further evidence suggests that PD may originate in the dorsal motor nucleus of the vagal and glossopharyngeal nerves and in the anterior olfactory nucleus, suggesting a disease pattern that begins in the brain stem and ascends to higher cortical levels. The histopathological features of PD include the loss of pigmented dopaminergic neurons and the presence of Lewy bodies (LBs).



Q.4. Difference between the Hyperglycemia and Hypoglycemia.

	Hyperglycaemia or diabetic coma	hypoglycaemic shock or hypoglycaemic coma
Cause	Increased insulin requirement	Too low blood glucose level
Development	Within few days	Within few minutes
Symptoms	Increased thirst Polyuria, glycosuria Deep breathing with acetone odour (type 1 only)	Cold sweat restlessness, muscle tingling hot starvation, Apathy Unconsciousness in a short time
Process	Measure blood sugar; Always report the values to the qualified nursing staff member	Observe promptly to the qualified nursing staff member
Treatment	Slowly lowering the blood glucose level in the intensive care unit	Immediately lift the blood glucose level with glucose (only if the patient is conscious) Possibly. Orange juice when the blood glucose level is not too low Blood glucose control As soon as possible, eat a piece of whole grain or fruit If unconscious, call a qualified nurse or doctor

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School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: SHP1110

Set-B

Time: 2 Hours

Course Name: Clinical Picture II

Max. Marks: 50

Instruction:

1. SECTION-A: Answer all questions from section A. Each question carries 01 mark
2. SECTION-B: Answer all questions from section B. Each question carries 04 marks
3. SECTION-C: Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Patient with epilepsy often suffer with.....as well:

- | | |
|----------------------|-----------------|
| a) Depression | b) Anxiety |
| c) Migraine headache | d) All of above |

Q.2. What is the underlying causes of epileptic seizures:

- | | |
|----------------------------------------------|----------------------|
| a) Barometric pressure | b) Congenital defect |
| c) Abnormal electrical activity in the brain | d) Allergies |

Q.3. Full form of EEG:

- | | |
|--------------------------|--------------------------|
| a) Electroencephalogram | b) Electroencephalogram |
| c) Electricencephalogram | d) Electroelectricalgram |

Q.4. Hyperglycemia is known as:

- | | |
|-----------------------|----------------------|
| a) Low blood sugar | b) High blood sugar |
| c) High insulin level | d) Low insulin level |

Q.5. What is the symptom of hypoglycemia?

- | | |
|-------------|--------------------|
| a) Polyuria | b) Muscle tingling |
| c) Polyuria | d) All of above |

Q.6. Polyuria meant is:

- | | |
|----------------------------|-----------------------|
| a) Excessive urination | b) Decrease urination |
| c) Excessive insulin level | d) High blood sugar |

Q.7. Myoclonic means is:

- | | |
|--------------------------|------------------------|
| a) Stiffness of the body | b) Dilatation of pupil |
| c) Sudden muscle jerks | d) Staring spells |

Q.8. Which neurotransmitter increase the level of Parkinson's?

- | | |
|---------------|------------------|
| a) Adrenaline | b) Noradrenaline |
| c) GABA | d) Dopamine |



Q.9. Early sign of Parkinson's disease is:

- a) Tremors
- b) Rigidity
- c) Akinesia
- d) Tachycardia

Q.10. What is the mode of administration of insulin injection?

- a) Intradermal
- b) Subcutaneous
- c) Intrathecal
- d) Intramuscular

Section – B

04X04 = 16 Marks

Q.1. Define Parkinson's. Describe the rigidity.

Q.2. Difference between the tremor and bradykinesia.

Q.3. Describe the pathology of pathology of Parkinson's disease.

Q.4. What do you mean type I diabetes mellitus?

Section – C

04X06 = 24 Marks

Q.1. Define epilepsy. Explain the partial seizure.

Q.2. Common restriction and support measures when taking care for people with Parkinson.

Q.3. Write down the six causes and symptom of epilepsy.

Q.4. Define diabetes mellitus. Write the treatment of diabetes type I and II.

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BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.:

School of Health Care and Paramedics Skills

Session: 2020-21 (Summer Semester)

B. Voc. Program, 1st Semester,

End-Sem. Examination

Course Code: 1110

Answers key

Time: 2 Hours

Course Name: Clinical Picture II

Max. Marks: 50

Instruction:

1. **SECTION-A:** Answer all questions from section A. Each question carries 01 mark
2. **SECTION-B:** Answer all questions from section B. Each question carries 04 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 06 marks

Section – A

10X01 = 10 Marks

Q.1. Patient with epilepsy often suffer with.....as well:

- a) Depression
- b) Anxiety
- c) Migraine headache
- d) **All of above**

Q.2. What is the underlying causes of epileptic seizures:

- a) Barometric pressure
- b) Congenital defect
- c) **Abnormal electrical activity in the brain**
- d) Allergies

Q.3. Full form of EEG:

- a) **Electroencephalogram**
- b) Electroencephalogram
- c) Electricencephalogram
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- b) **High blood sugar**
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- d) Low insulin level

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- b) **Muscle tingling**
- c) Polyuria
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Section – B

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Parkinson

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Rigidity

The third major cardinal feature of PD is rigidity, which presents as increased muscle tone or amplified resistance to a passive range of motion. The term commonly used to describe this phenomenon in PD patients is "cogwheel rigidity." This is best described as tension in the muscle, which displays small jerks or a ratchet-like quality when moved passively. Cogwheel rigidity requires an unambiguous diagnosis, since benign essential tremor may also present with a cogwheeling phenomenon. The rigidity of PD can affect other body parts besides the limbs, such as the face, which can display a "masked" expression (hypomimia).

Q.2. Difference between the tremor and bradykinesia.

Tremor

Tremor, which often presents as the initial symptom, occurs in approximately two-thirds of PD patients. It typically starts in a mild and intermittent fashion. The usual course is an initial unilateral tremor, which progresses to bilateral involvement over the duration of the disease. The tremor of PD is usually described as a resting tremor of the hand (pill-rolling tremor), although it can be present in the lower limbs, toes, and jaws. Stressful situations or asking the patient to perform a mental task may exacerbate and worsen a PD tremor, whereas movement or sleep diminishes the symptoms. Younger patients may have inconsistent presentations or tremor only during periods of fatigue. Although resting tremor is the most common type of tremor in PD, some patients may present with action tremor, e.g., tremor manifested during activity. The diagnostic process is further complicated by the presence of mixed tremor, as well as by the fact that patients with benign essential tremor (BET) may develop a resting tremor later in their disease. Although tremor is common in PD, it is considered to be the least disabling of the motor features compared with the other cardinal features—rigidity and bradykinesia.

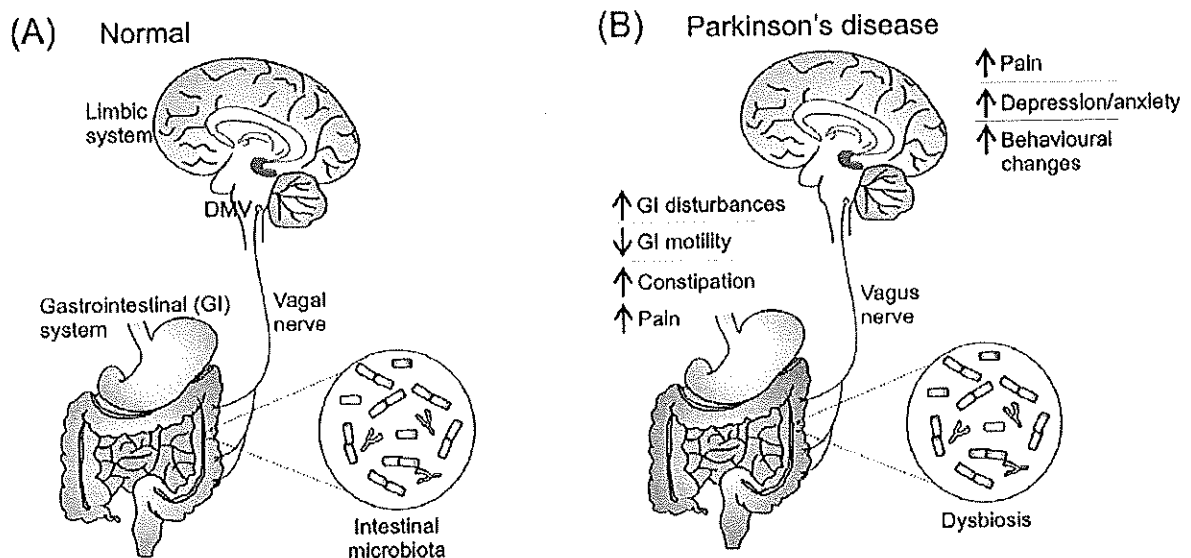
Bradykinesia

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Q.4. What do you mean type I diabetes mellitus?

Diabetes mellitus type I

Type 1 diabetes occurs because the insulin-producing cells of the pancreas (beta cells) are damaged. In type 1 diabetes, the pancreas makes little or no insulin, so sugar cannot get into the body's cells for use as energy. People with type 1 diabetes must use insulin injections to control their blood glucose. Type 1 is the most common form of diabetes in people who are under age 30, but it can occur at any age. Ten percent of people with diabetes are diagnosed with type 1.

Section – C

04X06 = 24 Marks

Q.1. Define epilepsy. Explain the partial seizure.

Epilepsy

Epilepsy is a chronic medical disorder or condition, usually resulting in unpredictable, unprovoked recurrent seizures that affect a variety of mental and physical functions. It is one of the most common neurological diseases, about 50 million people worldwide. Epilepsy was one of the first brain disorders to be described. Through the ages, the strange behavior caused by some seizures has led to the creation of numerous superstitions and prejudices.

A person is considered to have epilepsy when two or more unprovoked seizures occur that can't be explained by a medical condition such as fever or substance withdrawal. Seizures can be the result of a family tendency toward the disease, or they can occur after a brain injury, but the cause of epilepsy is largely unknown. Epileptic seizures are manifested by an abnormal, excessive, and hypersynchronous electrical discharge of neurons in the brain.

1. Partial seizure: -

A partial seizure means the epileptic activity took place in just part of the patient's brain. There are two types of partial seizure:

a. Simple partial seizure –

The patient is conscious during the seizure. In most cases, the patient is also aware of their surroundings, even though the seizure is in progress.

b. Complex partial seizure –

The patient's consciousness is impaired. The patient will generally not remember the seizure, and if they do, their memory will be vague.

Q.2. Common restriction and support measures when taking care for people with Parkinson.

Common restrictions and corresponding support measures are described

- If the disease is advanced, the affected person is often unable to do two things at the same time. They find it difficult, for example, to go to the door with a glass. This can end with spilling of the liquid or with a fall. Therefore, avoid such overburden if possible.
- The independent movement is an important therapeutic goal. Support the patient in his daily walking and exercise exercises.
- Standing up from the chair: When standing up from the chair it helps, for example, when the patient slides slowly with his buttocks forward against the chair edge, pulls his backwards, goes forward with his upper body, supports himself with his hands, get a swing and get up. Look for a hard armchair chair as it is easier for the patient to get up from it than from a soft chair without a backrest.



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- Walking: When the patient is standing, the next step is that she pushes her knees, stops for a while and then starts. Many falls can be avoided. Optical stimuli on the floor (cross-strips, checkerboard patterns), rhythm and music are helpful in the exercise. Frequently, giving a hand to the patient gives security. A walker or an adjustable walking stick can support independent walking.

Q.3. Write down the six causes and symptom of epilepsy.

Causes of Epilepsy: -

- Head trauma, for instance, during a car crash
- Stroke
- Tumors
- Infectious diseases (viral encephalitis)
- Prenatal injury
- Brain damage that occurs before birth
- Developmental disorder (Autism)

Symptom of Epilepsy: -

- Convulsion with no temperature (no fever)
- Intermittent fainting spells, during which bowel or bladder control is lost, which is frequently followed by extreme tiredness
- The person suddenly falls for no clear reason
- Sudden bouts of blinking without apparent stimuli
- Sudden bouts of chewing, without any apparent reason
- Peculiar changes in senses, such as smell, touch, and sound
- The arms, legs, or body jerk, in babies these will appear as a cluster of rapid jerking movements
- Fainting
- Cataplexy, or periods of extreme muscle weakness
- Sleep disorders
- Nightmares
- Panic attacks

Q.4. Define diabetes mellitus. Write the treatment of diabetes type I and II.

Diabetes mellitus is a disease that prevents your body from properly using the energy from the food you eat. Diabetes occurs in one of the following situations:

- The pancreas (an organ behind your stomach) produces little insulin or no insulin at all. Insulin is a naturally occurring hormone, produced by the beta cells of the pancreas, which helps the body use sugar for energy.
- The pancreas makes insulin, but the insulin made does not work as it should. This condition is called insulin resistance.

The body is made up of millions of cells. To make energy, the cells need food in a very simple form. When you eat or drink, much of your food is broken down into a simple sugar called glucose. Glucose provides the energy your body needs for daily activities. The blood vessels and blood are the highways that transport sugar from where it is either taken in (the stomach) or manufactured (in the liver) to the cells where it is used (muscles) or where it is stored (fat). Sugar cannot go into the cells by itself. The pancreas releases insulin into the blood, which serves as the helper, or the "key," that lets sugar into the cells for use as energy.



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Treatment

There is no cure for diabetes, but treatment can help people to manage it and prevent it from getting worse. Here are some points about treating and managing diabetes.

	Type I	Type II
Possible cure	Currently no cure, but lifetime treatment can manage symptoms. In time, gene therapy, regenerative medicine using stem cells, or pancreatic islet transplantation may become an option.	Currently no cure, but measures can slow progression and manage symptoms. Gastric bypass may reduce symptoms in people with severe obesity.
Treatment with insulin and other drugs	Daily insulin injections or using an insulin pump can provide insulin as needed through the day and night. Other drugs, such as pramlintide, can stop glucose levels from rising too far.	Metformin can reduce the amount of sugar the liver produces. SGLT2 inhibitors, DP-4 inhibitors, or alpha-glucosidase inhibitors (AGIs) can reduce blood sugar levels.
Lifestyle treatment	Follow the treatment plan and the doctor's instructions regarding insulin and glucose testing. Follow an active, healthful lifestyle to reduce the risk of cardiovascular disease and other health issues. Pay attention to glucose levels when exercising. Managing blood pressure and high cholesterol levels.	Follow the treatment plan and medical advice. Healthful diet, Regular exercise, Managing blood pressure and high cholesterol levels, Avoiding smoking, Knowing the signs of adverse effects and complications.
Avoiding complications	Follow the treatment plan and know the signs of hypo and hyperglycemia and the complications of diabetes.	Know the signs of possible complications to be ready to take action. Take measures to avoid infections. Check for wounds and seek early treatment. Have regular eye tests. Follow a healthful diet and take exercise to manage cholesterol levels and high blood pressure and reduce cardiovascular risk.
Prevention	It is not yet possible to prevent type 1 diabetes	Follow a healthful diet with regular exercise. Avoid or quit smoking.

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