# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**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. **Normal saliva pH level is:**

a) 5.4 to 7.5 b) 7 to 7.3

c) 7.35 to 7.45 d) 1.5 to 3.5

Q.2. **The innermost layer of the heart is:**

a) Epicardium b) Endocardium

c) Myocardium d) Pericardium

Q.3. **Endocrine glands release hormone:**

a) Through the duct in the body b) Directly in the skin

c) Directly into tissue d) Directly in the blood

Q.4. **What is the average GFR of an adult?**

a) 10 ml/day b) 180 liter/day

c) 1500 ml/day d) 1 ml/day

Q.5. **"Gonads" means:**

a) Testis and ovaries b) Sebaceous glands

c) Sweat glands d) Salivary glands

Q.6. **On the human body, the thickest skin is located on the:**

a) Thighs b) Bottocks

c) Palms and soles d) Abdomen

Q.7. **Which muscles is helpful in changing the shape of eye lens:**

a) Round ligament b) Broad ligament

c) Suspensory ligament d) None of these

Q.8. **Branched process of neurons are:**

a) Axon b) Myelin sheath

c) Dendrites d) Synapses

Q.9. **Right lungs has how many lobes?**

a) 2 b) 3

c) 4 d) 5

Q.10. **Appendix is attached to:**

a) Stomach

b) Small intestine

c) Cecum

d) Sigmoid colon

## Section – B

04X04 = 16 Marks

Q.1. Write down the four functions of blood.

Q.2. Draw the flow chart of human blood circulation.

Q.3. Describe the CSF.

Q.4 How to sound wave and the auditory process?

## Section – C

04X06 = 24 Marks

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

Q.2. Describe the Cornea, choroid, and ciliary body of eye.

Q.3. Explain the six cranial nerves with function.

Q.4. Explain the anatomy and physiology of stomach.

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## Section – B

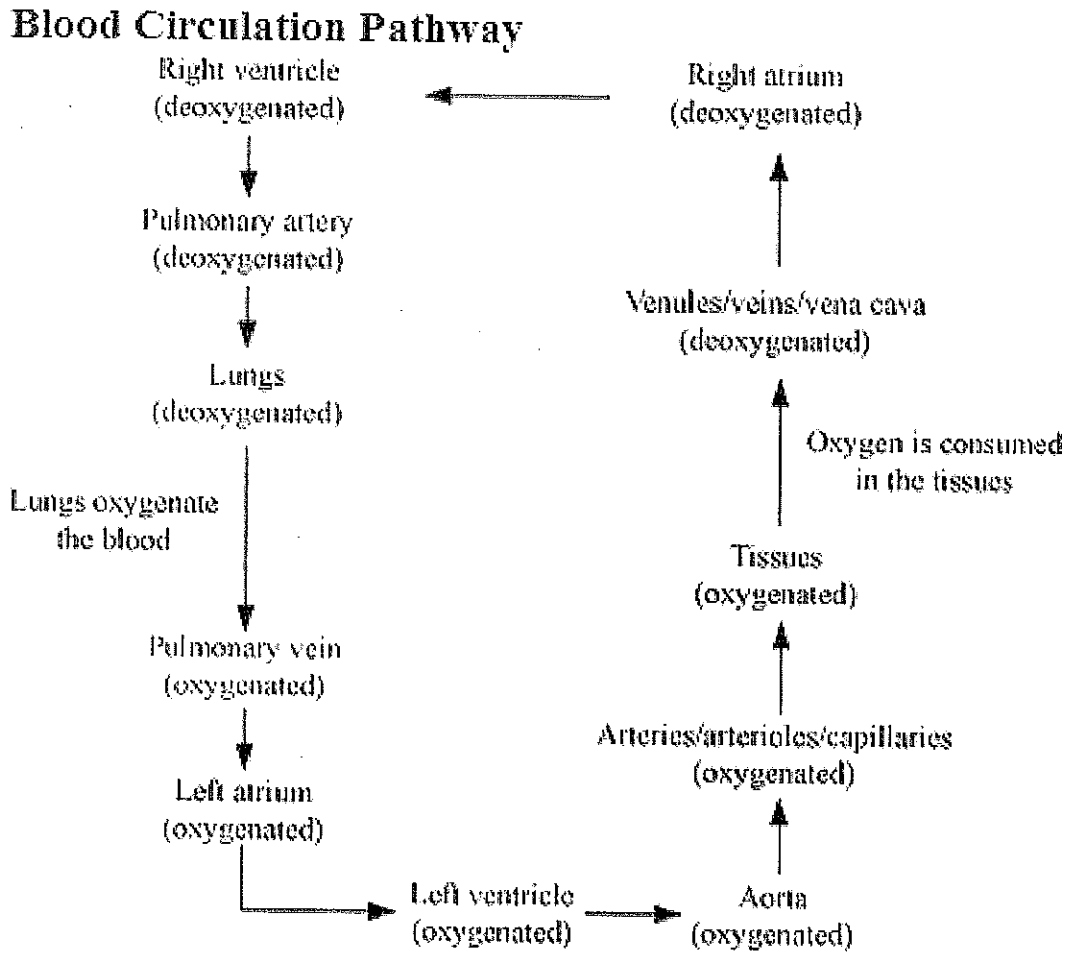
04X04 = 16 Marks

Q.1. **Write down the four functions of blood.**

| Function of blood |
|---|

- Transport (nutrients, oxygen, carbon dioxide, salts, hormones, waste products etc.)
- Heat distribution
- Defence against pathogens and foreign substances
- Wound closure (haemostasis and blood clotting)
- Buffer function- balancing out fluctuations in pH value

Q.2. **Draw the flow chart of human blood circulation.**



Q.3. **Describe the CSF.**

**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 **How to sound wave and the auditory process?**

**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.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

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

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.

### The cell: structure and functions

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.

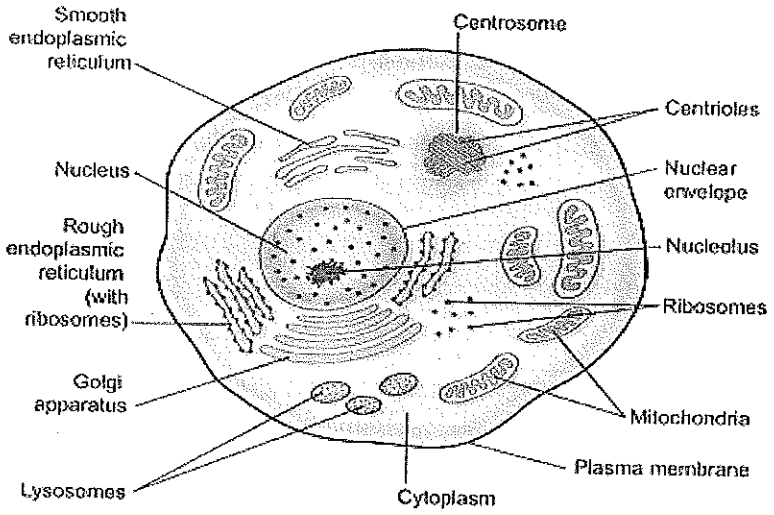



Figure 1: The cell: structure and functions

**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. **Describe the Cornea, choroid, and ciliary body of eye.**

**Sclera and cornea**

The sclera, or white of the eye, forms the outermost layer of the posterior and lateral aspects of the eyeball and is continuous anteriorly with the transparent cornea. Anteriorly the sclera continues as a clear transparent epithelial membrane, the cornea. Light rays pass through the cornea to reach the retina. The cornea is convex anteriorly and is involved in refracting (bending) light rays to focus them on the retina.

**Choroid**

The choroid lines the posterior five-sixths of the inner surface of the sclera. It is very rich in blood vessels and is deep chocolate brown in colour. Light enters the eye through the pupil, stimulates the sensory receptors in the retina and is then absorbed by the choroid.

**Ciliary body**

The ciliary body is the anterior continuation of the choroid consisting of *ciliary muscle* (smooth muscle fibres) and secretory epithelial cells. Contraction and relaxation of the ciliary muscle fibres, which are attached to these ligaments, control the shape of the lens. The epithelial cells secrete *aqueous fluid* into the anterior segment of the eye, i.e. the space between the lens and the cornea (anterior and posterior chambers).

Q.3. **Explain the six cranial nerves with function.**

**Cranial nerve**

There are 12 pairs of cranial nerves originating from nuclei in the inferior surface of the brain, some sensory, some motor and some mixed. Their names generally suggest their distribution or function and they are numbered using Roman numerals according to the order they connect to the brain, starting anteriorly. They are:

| s.no. | Name of Nerves | Types of nerves | Function |
|---|---|---|---|
| I. | Olfactory | sensory | These are the nerve sense of smell |
| II | Optic | sensory | These are the nerve of the sense of light |
| III | Oculomotor | motor | These nerves arise from nuclei near the cerebral aqueduct. They supply:<br>Four of the six extrinsic muscles, which move the eyeball |
| IV | Trochlear | motor | Eye movement |
| V | Trigeminal | mixed | These nerves contain motor and sensory fibres and are among the largest of the cranial nerves<br>Receiving Impulses of pain and chewing |
| VI | Abducent | motor | the eyeballs causing abduction |
| VII | Facial | mixed | These nerves are composed of both motor and sensory nerve fibres<br>Facial expression and teste |
| VIII | Vestibulocochlear (auditory) | sensory | Balance and hearing |
| IX | Glossopharyngeal | mixed | Both sensory and motor Secretion of the saliva, swallowing and teste |
| X | Vagus: mixed | | Secretion of the gland and sensory fibres convey impulses from the membranes. |
| XI | Accessory: motor | | Turning the hand lifting the shoulder |
| XII | Hypoglossal: motor. | | Contribute to swallowing and speech |

Q.4. **Explain the anatomy and physiology of stomach.**

| 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 in an enzyme for the digestion of protein.

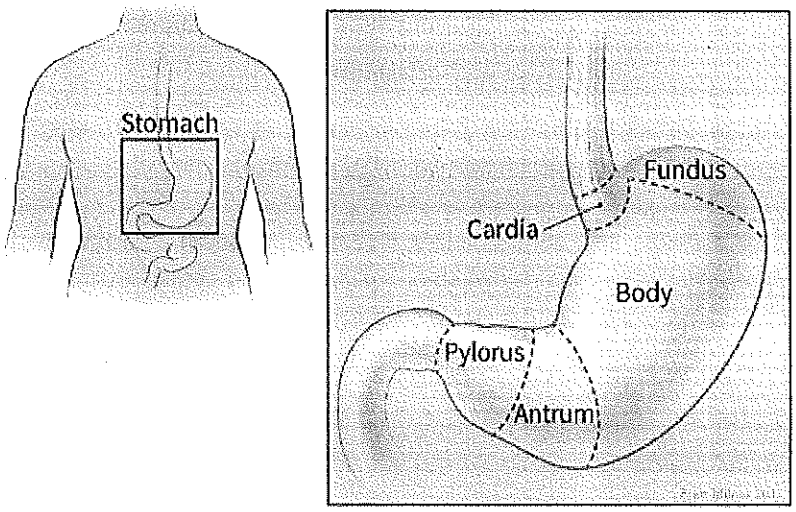



Figure 2: Stomach & Gaster

**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).

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## Section – A

10X01 = 10 Marks

Q.1. **Life span of RBC is:**

a) 120 Days b) 80 Days

c) 200 Days d) 60 Days

Q.2. **Oxygenated blood first enter int which chamber of heart:**

a) Right atrium b) Left atrium

c) Right ventricles d) Pulmonary aorta

Q.3. **Endocrine system consists of ductless glands which secrete:**

a) Enzymes b) Chemicals

c) Juices and electrolytes d) Hormones

Q.4. **Kidney is situated:**

a) In pelvic cavity b) In abdominal cavity

c) In thoracic cavity d) In dorsal cavity

Q.5. **"Gonads" means:**

a) Testis and ovaries b) Sebaceous glands

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Q.6. **On the human body, the thickest skin is located on the:**

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Q.7. **The anterior transparent part of the eye is:**

a) Pupil b) Conjunctiva

c) Cornea d) Sclera

Q.8. **What id specialized nerve cell?**

a) Dendrites b) Axon

c) Neuron d) Nucleus

Q.9. **Left lungs has how many lobes?**

a) 3 b) 2

c) 4 d) 5

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Q.10. **Which of the following is NOT a long bone?**

a) Humerus

b) Ulna

c) Sternum

d) Tibia

## Section – B

04X04 = 16 Marks

Q.1. Write down the four functions of skeletal system.

Q.2. Draw the flow chart of human blood circulation.

Q.3. Write down the name of cranial nerve.

Q.4 Describe the physiology of smell.

## Section – C

04X06 = 24 Marks

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

Q.2. Describe the layers of skin.

Q.3. Define trachea. Describe the anatomy and physiology of trachea.

Q.4. Explain the anatomy and physiology of liver.

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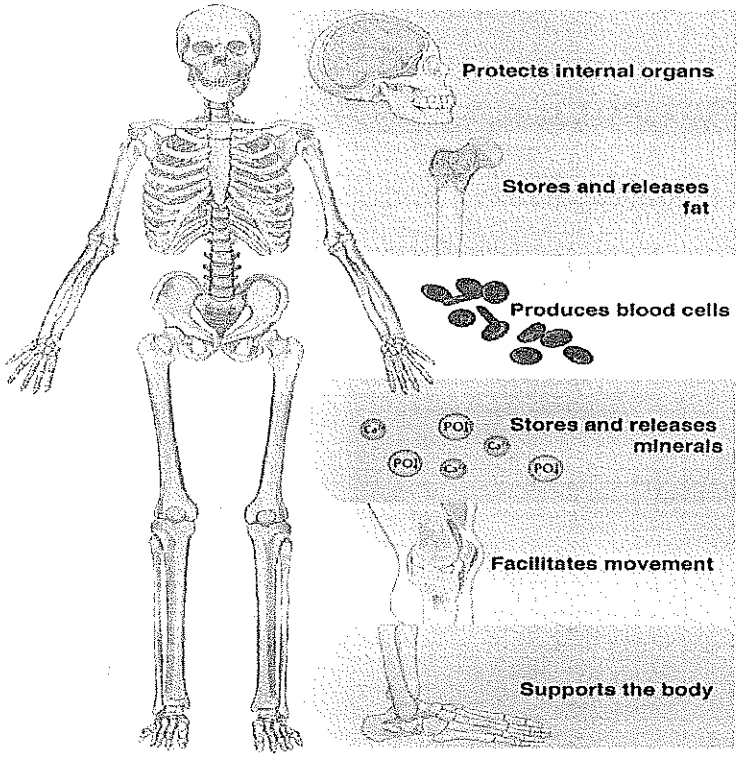
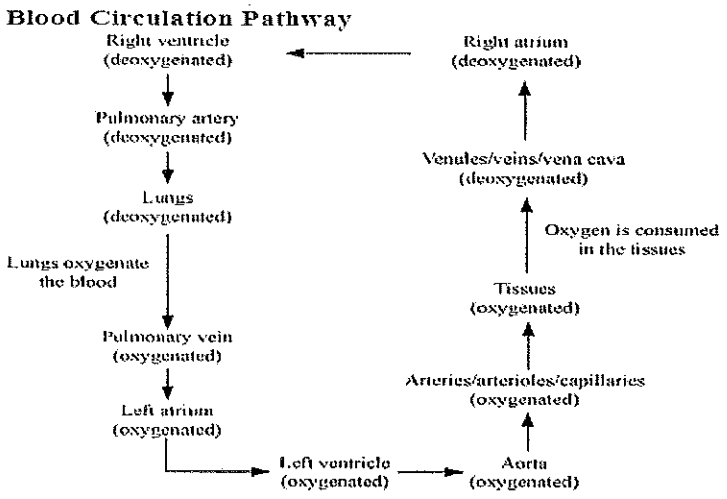



Q.2. Draw the flow chart of human blood circulation.



Q.3. Write down the name of cranial nerve.

| |
|---|
| Olfactory, Optic, Oculomotor, Trochlear, rigeminal, Abducent, Facial, Vestibulocochlear (auditory), Glossopharyngeal, Vagus: mixed, Accessory: motor, Hypoglossal: motor. |

Q.4 Describe the physiology of smell.

**Physiology of smell**

The human sense of smell is less acute than in other animals. Many animals secrete odorous chemicals called *pheromones*, which play an important part in chemical communication in, for example, territorial behaviour, mating and the bonding of mothers and their newborn. The role of pheromones in human communication is unknown. The air entering the nose is warmed, and convection currents carry eddies of inspired air to the roof of the nasal cavity. 'Sniffing' concentrates volatile molecules in the roof of the nose. This increases the number of olfactory receptors stimulated and thus perception of the smell. When accompanied by the sight of food, an appetising smell increases salivation and stimulates the digestive system. The sense of smell may create long-lasting memories, especially for distinctive odours, e.g. hospital smells, favourite or least-liked foods.

## Section – C

04X06 = 24 Marks

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

Group of the cells is knows 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.

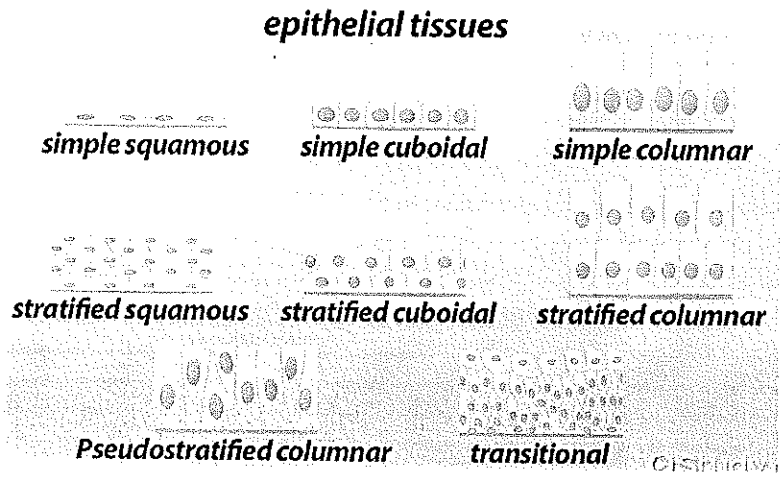
**Function**

- 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.




**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.

Q.2. **Describe the layers of skin.**

**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 obtain its nutrients from the dermis.

**Dermis**

The properties of the dermis include mechanical resilience and a good blood supply. This is made of connective tissue. Similarly to the epidermis, the dermis also contains sensory receptor and defence cells.

**Subcutaneous layer**

The subcutaneous is the connection to the deeper layer, the muscle and bones. It can vary in thickness and is made of connective tissue. Injection into the subcutaneous are called subcutaneous injection. This type of injection is used to produce a longer lasting effect, since the substance is absorbed slowly.eg. insulin inj.

Q.3. **Define trachea. Describe the anatomy and physiology of trachea.**

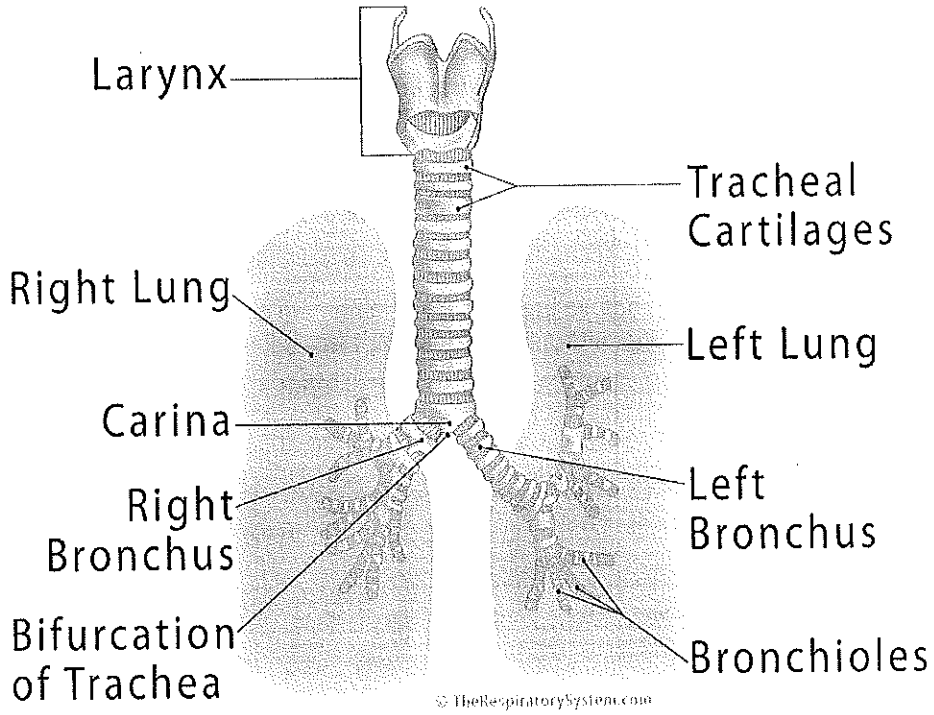
**Trachea (windpipe)**

**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 in to 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 incomplete (C-shaped) rings of hyaline cartilage.



**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.4. **Explain the anatomy and physiology of liver.**

**Liver**

The liver is the largest gland in the body, weighing between 1 and 2.3 kg. It is situated in the upper part of the abdominal cavity occupying the greater part of the right hypochondriac region, part of the epigastric region and extending into the left hypochondriac region.

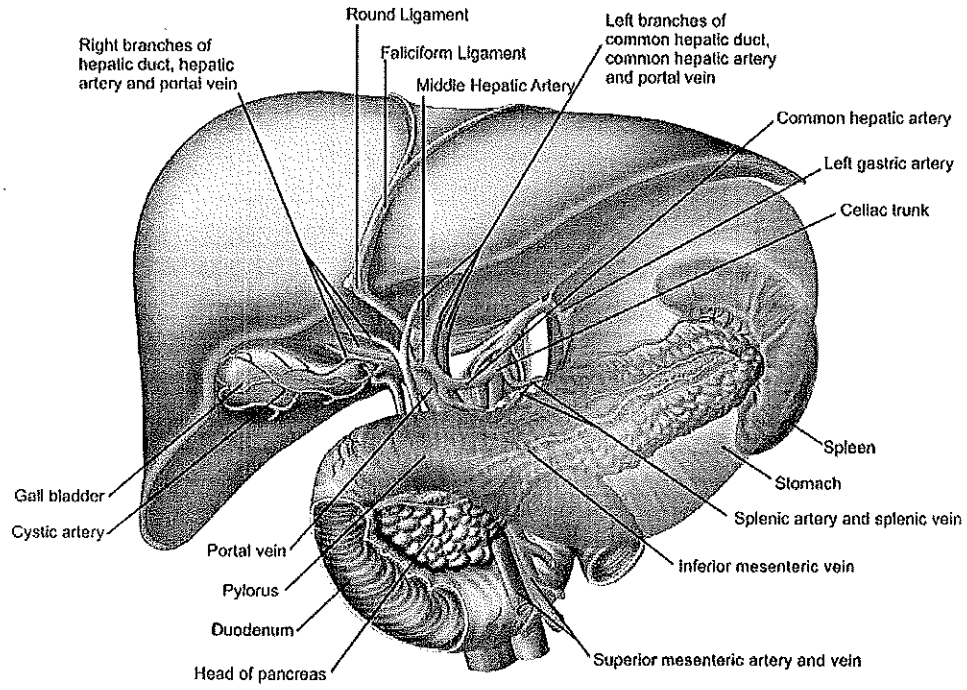



Figure 1: The Liver

**Function**

The liver function are extraordinarily varied. Substances are taken out of the blood and stored or convert in the liver. The products are then released into the blood or excreted as bile. A large proportion of the glucose which is absorbed into in the intestine is in turn absorbed by the liver cells and converted into glycogen. The liver also constructs and break down fats and convert carbohydrates into fats. Old red blood cells are broken down in the liver as well as in the spleen. Finally, liver stores iron and fat-soluble vitamins such as vitamin k, vitamin $B_{12}$ and vitamin A.

**Portal vein**

The nutrient-rich from the digestive organs is transported to the liver via the portal vein. The substances are then processed in the liver.

**Gall bladder**

The gall bladder is a pear-shaped sac attached to the posterior surface of the liver by connective tissue.

**Function**

- Reservoir for bile.
- Concentration of the bile by up to 10- or 15-fold, by absorption of water through the walls of the gall bladder.
- Release of stored bile.

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**Course Code: SHP1102** **Time: 2 Hours**

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

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## Section – A

10X01 = 10 Marks

Q.1. **Which one of the following is an unhealthy food?**

a) Sharing food
b) Bathing twice a day
c) Drinking boiled water
d) Eating without washing one's hands

Q.2. **What is the primary purpose of hand hygiene?**

a) To keep hand clean
b) To keep nails clean
c) To reduce microorganism to the hands
d) To maintain skin integrity

Q.3. **Common type of nosocomial infection is:**

a) Urinary tract infection
b) Meningitis
c) Gastroenteritis
d) Cellulitis

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 factors is necessary for a healthy person?**

a) Vaccination
b) Balanced diet
c) Personal hygiene
d) All of above

Q.6. **How long approximately should you wash your hand?**

a) 45 second
b) 10 second
c) 1 Minute
d) 2 minutes

Q.7. **Sharp instruments should be disposed in:**

a) Red bag
b) Blue bag
c) Black bag
d) Yellow bag

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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. **What is the benefit of practicing good personal hygiene?**

a) Improve self – esteem
b) better health
c) Other will have a better perception of you
d) All of above

## Section – B

04X04 = 16 Marks

Q.1. Define hygiene. Describe the factors of personal hygiene.

Q.2. Define infections. Draw the chart of chain of infection.

Q.3. What do you mean professional contact? Write down the principles of professional contact.

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

## Section – C

04X06 = 24 Marks

Q.1. Define nosocomial infection. Explain the route of transmission.

Q.2. Define security. Explain the 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.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**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. **Which one of the following is an unhealthy food?**

a) Sharing food
b) Bathing twice a day
c) Drinking boiled water
**d) Eating without washing one's hands**

Q.2. **What is the primary purpose of hand hygiene?**

a) To keep hand clean
b) To keep nails clean
**c) To reduce microorganism to the hands**
d) To maintain skin integrity

Q.3. **Common type of nosocomial infection is:**

**a) Urinary tract infection**
b) Meningitis
c) Gastroenteritis
d) Cellulitis

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:**

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## Section – B

04X04 = 16 Marks

Q.1. **Define hygiene. Describe the factors of personal 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 wastewater 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 tats 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.

**Influencing factors – Biological factors**

How a person takes care of their personal hygiene will depend on their age or stage of development, gender, state of health, physical activity, skin condition and how they sweat. For example, younger people will tend to shower daily. Older people often used to tend to have a bath once a week (in the bathtub) or wash at the washbasin. Nobody really thought about washing their whole body each day. It is hardly surprising then if some patients are resistant to the idea of performing personal hygiene on a frequent basis. They do not feel dirty and think that washing is pointless or even harmful. It is a case of striking a balance therefore between washing as little as possible to respect the individual preferences of clients and washing as often as it is necessary to prevent pathogens multiplying and bad odours building up.

**Psychological factors:**

Individual attitudes and mood can have an influence on personal hygiene. In particular, the choice of personal hygiene products, use of perfume, choice of clothes and hairstyle will depend on psychological factors. These are expressions of personal identity.

**Sociocultural factors**

Personal hygiene and choice of clothes are passed on to children by their parents and social environment. Much will depend on financial resources, status and current fashion trends. Clothes are often determined by a sense of belonging to a specific group or culture. They indicate whether or not someone belongs to a group and are especially important to young people. In contrast, older people learned during their childhood to have a bath on Saturday and only wear their best clothes on Sundays or public holidays. These habits can still be seen in some patients. Almost all countries around the world have experienced some degree of multicultural-ism over the past years and decades. This means there are people living everywhere now from different cultures and religions that set out certain rules regarding things like personal hygiene. It goes without saying thatwe take people's needs and habits seriously and accommodate these where possible, particularly those based on a patients religion, and take these into account in terms of personal hygiene. For example, Muslims or Hindus can only perform personal hygiene under running water as used water is deemed to be unclean

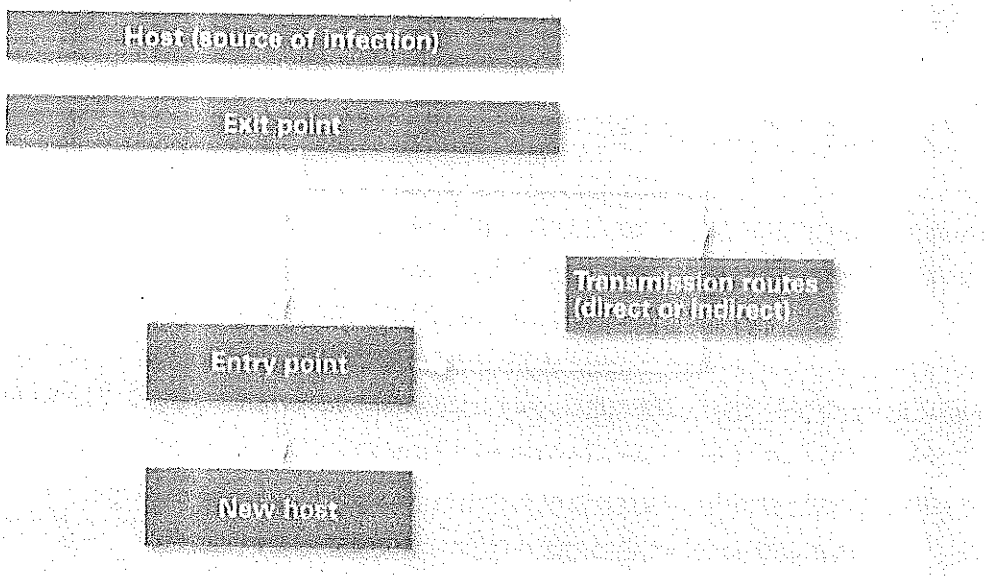
**Environmental factors**

Our sanitary facilities make it possible to customize personal hygiene to the individual needs of each person. The environment and climate also play a significant role in the choice of clothes and use of skin care products. It is not always possible in hospital to take into account individual preferences in terms of personal hygiene or clothes. One example is when a hospital nightshirt needs to be worn during surgery or specific investigations. These restrictions should, however, be kept to a minimum.

Q.2. Define infections. Draw the chart of chain of infection.

**Infections**

Those working in health care are often exposed to potential infections in the workplace. Infections also play a big role in the transmission of germs, which is why you need to be suitably familiar with them. Inflammation is the term used when the body reacts to an external or internal source of irritation such as germs or injury. The resulting signs include redness, swelling, overheating, pain and functional impairment. These may be positive too, such as during the wound healing process. Infection refers to the transmission, penetration and multipli- cation of pathogens in the human body and the pathological response that occurs. Man lives among microor- ganisms. He breathes them in and eats them with his food, and his skin and digestive tract provide a habitat for them. That said, however, the number of germs that are harmful to humans is relatively low. Every healthy individual has an immune System which acts as a defense against harmful microorganisms.




Q.3. **What do you mean professional contact? Write down the principles of professional contact.**

**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.

**Principles of professional contact – conequences for personal hygiene**

- Contact is a form of communication: make it clear and unambiguous — avoid abrupt and excessively quick contact as this can be unsettling.
- Show respect if someone does not wish to be touched.
- Establish initial contact via the social zones, e.g. hands, arms, shoulders.

Q.4. **Write down the Eight principles of personal hygiene.**

**Principes 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 an 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. Define nosocomial infection. Explain the route of transmission.

**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.

**Transmission routes**

Germs can be transmitted in various ways. Pathogens can be transmitted from person to person directly, such as via hands or wounds, or indirectly, such as via objects, droplets or through the air (aerogens) in the case of, say, influenza and tuberculosis.

| Direct Transmission | Example |
|---|---|
| Contact infection | Wound infections |
| Smear infection / contact infection (oral, faecal) | Gastroenteritis, urinary tract infection. During sex: HIV, syphilis etc. |
| Droplet infection | Colds, flus |
| Aerogen | Tuberculosis, varicella (chickenpox) |
| Food and water (alimentary) | Salmonella infection, campylobacter (poultry), cholera |
| Blood (haematogenous) | Hepatitis B and D caused, for example, by an injury involving a used cannula |

| Indirect transmission | Example |
|---|---|
| Contaminated environment (via the hands, mouth) | Urinary tract infection, wound infection |
| Intermediate hosts such as ticks and mosquitos | TBE (tick-borne encephalitis), malaria |
| Via object | Germs on equipment used for patients, bedside table, urine bottle, potty |

Q.2. **Define security. Explain the factors of security.**

**Security**

The term security comes from the Latin word 'securus' and means carefree, unconcerned, secure. It is im- portant for all of us to feel secure and achieve security so we can go about out 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:

**1 Biological factors**

- stage of development and age
- bodily functions

**2 Psychological factors**

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

**3 Sociocultural factors**

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

**4 Environmental factors**

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

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 and disease**

**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 heath 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 hygiene**

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 (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?** | • Before and after any client contact<br>• Before and after any aseptic treatment<br>• After contact with bodily fluids<br>• After contact with contaminated object, e.g. bed, bedside table<br>• After removing gloves<br>• After sneezing, coughing, wiping nose |
| **How?** | • Dispense an alcohol-based hand disinfectant into the dry palm of your hand<br>• 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 fingerstips, the area between the fingers or the folds of skin on the palm of the hand
- If applied correctls, 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?** | • When starting and finishing work<br>• Before handling food<br>• Before and after food breaks<br>• If hands are visibly dirty<br>• After using the bathroom |
| **How?** | • Wet the hands<br>• Rub normal liquid soap into the hands wrists for at least 30 seconds<br>• Rinse thoroughly with water<br>• Dry with a paper towel |
| **Please note!** | • Turn off the tap with the used paper towel<br>• 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<br>• Disinfection soaps are only used in specific areas of the hospital |

**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?** | • During winger, when the skin is dry<br>• Before lengthy breaks<br>• After finishing work |
| **How?** | • Rub hand cream into clean hands |
| **Please note!** | • Damaged, broken skin provides a better habitat for pathogens not associated with normal skin flora, e.g. methicilin-resitant Staphylococcus aureus (MRSA).<br>• 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.<br>• Never disinfect wet hands as this too causes skin to dry out. |

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**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**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. **One of the best ways to reduce the incidence and spread of disease is not by:**

a) Correct handwashing b) Getting vaccines

c) Following advice and guidelines of doctors d) Having poor hygiene

Q.2. **When you cough or sneeze you should?**

a) Put in your hand in front of your mouth b) Use flexed arm to cover your mouth

c) Both a and b d) Keep your mouth uncovered

Q.3. **Which one is not included in prevention of HAI?**

a) Antibiotics for all patients b) Hand hygiene

c) Proper aseptic techniques d) Proper segregation and disposal of waste

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 **Asepsis is known as:**

a) Freedom from infection b) Relief from fever

c) Relief from pain d) Relief from allergy

Q.6. **How long approximately should you hand disinfection your hand?**

a) 30 second b) 10 second

c) 45 Second d) 1 minute

Q.7. **In a hospital waste, human tissue and body parts are discarded in:**

a) Red bag b) Blue bag

c) Black bag d) Yellow bag

Q.8 **Drag and drop the correct order of donning PPE:**

a) Hand hygiene, Gown, Gloves, Eye wear, Mask

b) Hand hygiene, Gown, Mask, Eyewear, Gloves

c) Mask, Gloves, Eyewear, Hand hygiene, Gown

d) Hand hygiene, Gloves, Mask, Gown, Eye Wear

Q.9. **Place the following hand hygiene technique in the correct order:**

a) Check for visible soil on hands, Wet hands, Apply soap, Scrub hands, Dry hands

b) Check for visible soil on hands, Apply soap, Wet hands, Dry hands, Scrub hands

c) Wet hands, Apply soap, Scrub hands, Check for visible soil on hands, Dry hands

d) Wet hands, Apply soap, Scrub hands, Dry hands, Check for visible soil on hands

Q.10. **What is the benefit of practicing good personal hygiene?**

a) Improve self – esteem

b) better health

c) Other will have a better perception of you

d) All of above

## Section – B

04X04 = 16 Marks

Q.1. Define personal hygiene. Describe the physiology and pathology causes of skin colour changes.

Q.2. Define infections. Write down the six sources of infection with the examples.

Q.3. What do you mean professional contact? What is the difference between antisepsis and asepsis?

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

## Section – C

04X06 = 24 Marks

Q.1. Define nosocomial infection. Explain the disinfectant agents and ways of disinfecting.

Q.2. Define security. Explain the signs of insecurity.

Q.3. Define occupational safety. Describe the protective measures.

Q.4. What is aim of hand hygiene.

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d) Hand hygiene, Gloves, Mask, Gown, Eye Wear

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**a) Check for visible soil on hands, Wet hands, Apply soap, Scrub hands, Dry hands**

b) Check for visible soil on hands, Apply soap, Wet hands, Dry hands, Scrub hands

c) Wet hands, Apply soap, Scrub hands, Check for visible soil on hands, Dry hands

d) Wet hands, Apply soap, Scrub hands, Dry hands, Check for visible soil on hands

Q.10. **What is the benefit of practicing good personal hygiene?**

a) Improve self – esteem
b) better health
c) Other will have a better perception of you
**d) All of above**

## Section – B

04X04 = 16 Marks

Q.1. Define personal hygiene. Describe the physiology and pathology causes of skin colour changes.

**Personal Hygiene**

In your day-to-day work, you have to help various people with personal hygiene. Your tasks also mean you can observe and assess people 's skin, recognize changes and act accordingly. Our skin is the gown that grows as we grow, offers us protection and fits like a glove our whole lives long.

**Changes in skin colour and their causes**

Changes in skin colour can have both physiological and pathological causes. The following table lists the most common changes in skin colour and their causes.

| Change in colour | Physiological causes | Pathological causes |
|---|---|---|
| **Pale** | • Contraction of capillary vessels in cold conditions, skin is white or blue<br>• Psychological factor: pale with fright | • E.g. in the event of blood loss (shock), anaemia (particular visible in the mucosa), problems with arterial blood flow |
| **Red** | • Psychological factor: red with anger or shame<br>• Expansion of capillary vessels in warm conditions, skin becomes red | • Fever<br>• Hypertension<br>• Stage 1 decubitus ulcer<br>• Sometimes with first-degree burn<br>• Frostbite, inflammation, allergies etc. |
| **Blue** | • Contraction of capillary vessels in cold conditions, skin is white or blue | • Cyanosis associated with heart or lung disease |

Q.2. **Define infections. Write down the six sources of infection with the examples.**

**Infections**

Those working in health care are often exposed to potential infections in the workplace. Infections also play a big role in the transmission of germs, which is why you need to be suitably familiar with them. Inflammation is the term used when the body reacts to an external or internal source of irritation such as germs or injury. The resulting signs include redness, swelling, overheating, pain and functional impairment. These may be positive too, such as during the wound healing process. Infection refers to the transmission, penetration and multipli- cation of pathogens in the human body and the pathological response that occurs. Man lives among microor- ganisms. He breathes them in and eats them with his food, and his skin and digestive tract provide a habitat for them. That said, however, the number of germs that are harmful to humans is relatively low. Every healthy individual has an immune System which acts as a defense against harmful microorganisms.

**Sources of infection (host) –** There are various places where pathogens live, multiply and spread:

- humans, e.g. patients, nursing personnel, visitors, cleaning personnel, particularly via the hands
- animals (e.g. rabies in dogs)
- dirty drinking water (e.g. germs in bathwater
- food that has gone oft (e.g., mould)
- dust (e.g. tuberculosis bacteria)
- soil (e.g. tetanus pathogens in the ground)
- equipment used for patients such as urine bottles and bedpans, thermometers, stethoscopes

Q.3. **What do you mean professional contact? What is the difference between antisepsis and asepsis?**

**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.

**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.4. **Write down the Eight principles 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 an 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.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

Q.1. Define nosocomial infection. Explain the disinfectant agents and ways of disinfecting.

**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.

**Desinfectant agents**

| Active ingredient | Application | Effect |
|---|---|---|
| **Alcohol** | Hand disinfection<br>Skin disinfection<br>Surface disinfection | Fast-acting (within seconds)<br>Often inadequate against fung / spores |
| **Aldehydes, peracetic acid, O2 – realising agents** | Surface disinfection<br>Device in rooms / instruments | Effects lasts for up to an hour<br>Biodegrable |
| **Halogens, e.g. Iodine** | Laundry disinfection<br>Waste water disinfection<br>Swimming pools | Chlorine has a bleaching effect |
| **Octenidine** | Disinfection of mucosa<br>Wound disinfection | Effective against bacteria, stick rigidly to the application time |
| **Ammonium** | Devices<br>Surface disinfection | Non-toxic, may also be used in kitchens |

There are various ways to disinfect an object:

**Physical measures**

These are thermal processes (= using heat), filtration and radiation.

**Thermal processes**

Boiling in hot water at 93°C for 3 minutes or in special rinsing machines at 90°C for 5 minutes, e.g. drinking bottles for infants, various instruments such as tweezers

**Filtration**

Special fine filters (HEPA filters) for filtration of air in operating theatres and intensive care wards

**Radiation**

Ultraviolet light for the preparation of drinking water (in developing countries)

Q.2. **Define security. Explain the signs of insecurity.**

**Security**

The term security comes from the Latin word 'securus' and means carefree, unconcerned, secure. It is im- portant for all of us to feel secure and achieve security so we can go about out 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.

**Signs of insecurity**

- patient rarely expresses insecurity directly;
- repeated questions such as: What would you do in my position?'
- patient reacts in an irritated of 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.3. **Define occupational safety. Describe the protective measures.**

**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.

**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 in- clude wearing gloves, aprons, masks and protective glasses, as well as proper handling of laundry and equip- ment and the disposal of bodily fluids.

**Gloves**

Disposable gloves (nitrile, vinyl) are worn every time contact with bodily fluids/substances or objects and sur- faces contaminated with these is certain or possible. Gloves are removed or replaced after any contact/con- tamination involving bodily fluids/sub stances 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 avoiding 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.

Q.4. **What is aim of hand hygiene?**

**Hand hygiene**

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 (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?** | • Before and after any client contact<br>• Before and after any aseptic treatment<br>• After contact with bodily fluids<br>• After contact with contaminated object, e.g. bed, bedside table<br>• After removing gloves<br>• After sneezing, coughing, wiping nose |
| **How?** | • Dispense an alcohol-based hand disinfectant into the dry palm of your hand<br>• 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 fingerstips, the area between the fingers or the folds of skin on the palm of the hand
- If applied correctls, 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.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Hand washing

| | |
|---|---|
| **When?** | • When starting and finishing work<br>• Before handling food<br>• Before and after food breaks<br>• If hands are visibly dirty<br>• After using the bathroom |
| **How?** | • Wet the hands<br>• Rub normal liquid soap into the hands wrists for at least 30 seconds<br>• Rinse thoroughly with water<br>• Dry with a paper towel |
| **Please note!** | • Turn off the tap with the used paper towel<br>• 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<br>• Disinfection soaps are only used in specific areas of the hospital |

## 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?** | • During winger, when the skin is dry<br>• Before lengthy breaks<br>• After finishing work |
| **How?** | • Rub hand cream into clean hands |
| **Please note!** | • Damaged, broken skin provides a better habitat for pathogens not associated with normal skin flora, e.g. methicilin-resitant Staphylococcus aureus (MRSA).<br>• 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.<br>• Never disinfect wet hands as this too causes skin to dry out. |

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

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**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1103** **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. **Which of the following part of body help in movement?**

a) Organ and skin
b) Muscle and bone
c) Muscle and skin
d) Organ and bone

Q.2. **Crepitation is known as:**

a) Tangible rubbing of bone
b) Abnormal mobility
c) Abnormal position
d) Mobility restriction

Q.3. **When moving a heavy object, it is best to:**

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

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

a) Open fracture
b) Compound fracture
c) Impacted fracture
d) Closed fracture

Q.5. **All of the following are types of fractures except:**

a) Simple
b) Impacted
c) Lacerated
d) Complicated

Q.6. **What is the biological factor of fall?**

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

Q.7. **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

Q.8. **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

Q.9. **A fracture is:**

a) A partial break in the continuity of a bone

b) A break in the continuity of a bone and ligament

c) Any break in the continuity of a bone

d) A break in the continuity of a bone and tendon

Q.10. **A motor vehicle accident victim has open fracture of right leg, severe pain in neck, grade II shock. A trauma surgeon should:**

a) Apply compression dressing to leg

b) Transfuse one bottle of blood

c) Post for debridement of leg wound

d) Order CT -Scans of cervical spine

## Section – B

04X04 = 16 Marks

Q.1. Define movement. Describe the biological and environmental factors of movement.

Q.2. Define ergonomics. Write down the three aims of ergonomics.

Q.3. Explain the treatment of arthroses.

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

## Section – C

04X06 = 24 Marks

Q.1. Define gout. Write down the four causes and treatment of gout.

Q.2. Define fall prevention. Explain the two risk factors of fall prevention and draw the chart of estimating the risk of falls.

Q.3. Explain the decubitus prophylaxis.

Q.4. Define fracture. Write down the principles of walking and mobilization aids and treatment of rheumatoid arthritis.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

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c) Muscle and skin d) Organ and bone

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**a) Apply compression dressing to leg**

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d) Order CT -Scans of cervical spine

## Section – B

04X04 = 16 Marks

Q.1. **Define movement. Describe the biological and environmental 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".

**Influencing Factors**

| | |
|---|---|
| Biological factors | The age or stage of development of a person will influence their mobility. As children practice their motor skills, they become familiar with their environment, which is an important prerequisite site for developing their mental faculties. In addition, the body 's ability to move depends on a person 's general condition, muscle strength and state of health. The sick or those suffering with pain or disability, as a result, for example, of malnutrition, impaired cardiovascular performance or immobility, will be restricted in their mobility. |
| 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. |
| 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. |
| Environmental factors | A person 's environment and living conditions will influence their behavior in terms of movement. Children living in cramped conditions with no real opportunity to spend time outside will not have much opportunity to indulge their natural appetite for movement. Those with restricted mobility are dependent on aids like a lift in an apartment block in order to leave their home. Climate and weather can also play a major role in people 's movement. |

Q.2. **Define ergonomics. Write down the three aims of ergonomics.**

**Ergonomics**

The term 'ergonomics combines the Greek words ergon = work and nomos= law. Ergonomics is the science of improving working conditions, particularly in terms of avoiding damage to health.

**Aims of ergonomics**

- Avoid direct or long-term damage caused by work
- Ensure work can be done in a way that reflects an individual 's circumstances
- Ensure working conditions do not have a negative impact on people 's mental health or well-being.

Q.3. **Explain the treatment of arthroses.**

**Treatment**

Arthrosis-related changes cannot be reversed. The aims of treatment are therefore pain relief, improved mo- bility 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.
- 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:
  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.

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 pro- cess on a regular basis as required
- The bell should be working properly and in easy reach
- The bed is set to its lowest level (dose 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 pa- tient 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)

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

Q.1. **Define gout. Write down the four causes and treatment of gout.**

**Gout**

Gout is a form of acute arthritis that causes severe pain and swelling in the joints. A typical sign is an increase in the level of uric acid in the blood. This increased level of uric acid causes uric acid crystals to form, which are then deposited in the joints where they cause inflammatory reactions.

**Causes/risk factors**

- Genetic predisposition
- Environmental factors such as an excessive intake of high-purine foods like meat, pulses etc., high alcohol intake, stress
- Excess weight, hypertension
- High doses of diuretic-based treatments
- Kidney diseases where elimination of uric acid is reduced (eg. diabetic nephropathy)

**Treatment**

- Anti-inflammatories and analgesics are administered for an acute attack of gout.
- High doses of antirheumatics such as Voltarol® are used or sometimes even cortisone, which is in- jected directly into the joint. Colchicine, an old medicine obtained from the Colchicum plant family, has proven successful in refractory cases.
- During attack-free periods, attempts are made to reduce the uric acid level through medication and changes in diet.
- Both uricostatic and uricosuric drugs are used forthis purpose. Uricostatics reduce the production of uric acid. They are few well tolerated and are associated with hardly any side effects. One example is Zyloric®. Diuretics should be avoided if at all possible.
- In terms of changes in diet, the aim is keep urine levels low, which means eating little or no food that causes the uric acid in the blood to increase. Alcohol should be avoided too. At least 2 liters of fluids should be drunk a day. Efforts should be made to lose any excess weight

Q.2. **Define fall prevention. Explain the two risk factors of fall prevention and draw the chart of estimating the risk of falls.**

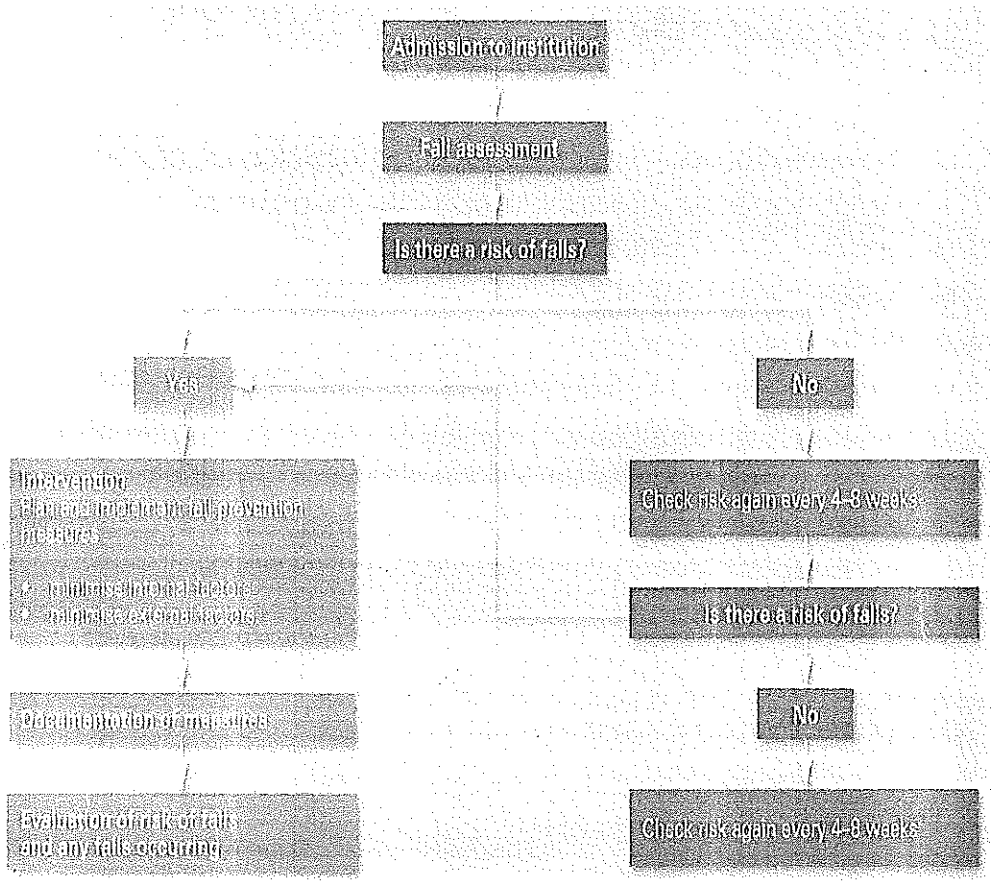
**Fall Prevention**

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.

**Risk Factors**

| | |
|---|---|
| Biological factors | Play a major role, particularly age and gender. Women have more falls. The risk of falls increases significantly with age. It is 3 times as high for 90-year-old than for those aged 65 to 69. Hypotension and memory problems present additional risks. |

| | |
|---|---|
| Personal factors | Are mainly mobility restrictions due to problems with walking or balance, muscle weakness, Parkinson 's disease, multiple sclerosis and pain. The greater the mobility restriction, the higher the risk of falls such as for those with hemiplegia. Other factors include impaired vision or hearing, perception disorders and psychiatric disorders such as depression. The risk also increases if people use alcohol or medicines such as sleeping pills. |
| Environmental risk factors | Tend to be situation-specific, such as an unfamiliar environment, night time or poor light. 50% of falls occur within a week of a patient being transferred to an unfamiliar environment. Living surroundings and furnishings such as steep stairs, carpets, missing bed rails and handles can lead to falls. |




Q.3. **Explain the decubitus prophylaxis.**

**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 sup- port 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. **Define fracture. Write down the principles of walking and mobilization aids and treatment of rheumatoid arthritis.**

**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:

**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 ensur- ing 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°. Lf just the one stick is used, it should generally be on the 'healthy 'side to provide some relief for the affected side.

**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

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**End-Sem. Examination**

**Course Code: SHP1103** **Time: 2 Hours**

**Course Name: Body Mechanics, 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. **Pressure sore is caused by:**

a) Fracture
b) Bacteria
c) Infection
d) Reduce circulation in skin

Q.2. **Which part of the body is affected by gout disease?**

a) Index finger
b) Hip joint
c) Knee joint
d) Toe joint

Q.3. **Mobility is known as:**

a) Restricted the movement
b) Unable to freely movement
c) Able to freely movement
d) Both b and c

Q.4. **Close fracture is known as.**

a) Broken bone that does not penetrate the skin
b) No complete break the bone
c) Broken bone with penetrate the skin
d) Complete break the bone

Q.5. **All of the following are types of fractures except:**

a) Simple
b) Impacted
c) Lacerated
d) Complicated

Q.6. **What is the biological factor of fall?**

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

Q.7. **What do you meant by "Ergonomics"?**

a) Work with law
b) Work with efficiency
c) Work with reflects
d) All of above

Q.8. **Increase in the uric acid in blood is known as:**

a) Arthroses

b) Rheumatic

c) Hematoma

d) Gout

Q.9. **A fracture is:**

a) A partial break in the continuity of a bone

b) A break in the continuity of a bone and ligament

c) Any break in the continuity of a bone

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Q.10. **A motor vehicle accident victim has open fracture of right leg, severe pain in neck, grade II shock. A trauma surgeon should:**

a) Apply compression dressing to leg

b) Transfuse one bottle of blood

c) Post for debridement of leg wound

d) Order CT -Scans of cervical spine

## Section – B

04X04 = 16 Marks

Q.1. Describe the influencing factors of movement.

Q.2. Define kinesthetics. Write down the four differences between the open and closed fracture.

Q.3. Describe the surgical treatment of fracture.

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

## Section – C

04X06 = 24 Marks

Q.1. Define rheumatoid arthritis. Write down the four causes, symptom and treatment of rheumatoid arthritis

Q.2. Define fall prevention. Write down the basic rules for dealing with people in a wheelchair.

Q.3. Explain the decubitus prophylaxis.

Q.4. Describe the ergonomics in the workplace.

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**c) Able to freely movement** d) Both b and c

Q.4. **Close fracture is known as.**

**a) Broken bone that does not penetrate the skin** b) No complete break the bone

c) Broken bone with penetrate the skin d) Complete break the bone

Q.5. **All of the following are types of fractures except:**

a) Simple b) Impacted

**c) Lacerated** d) Complicated

Q.6. **What is the biological factor of fall?**

a) Hypotension b) Carpets

c) Stairs d) Poor light

Q.7. **What do you meant by "Ergonomics"?**

**a) Work with law** b) Work with efficiency

c) Work with reflects d) All of above

Q.8. **Increase in the uric acid in blood is known as:**

a) Arthroses

b) Rheumatic

c) Hematoma

**d) Gout**

Q.9. **A fracture is:**

a) A partial break in the continuity of a bone

b) A break in the continuity of a bone and ligament

**c) Any break in the continuity of a bone**

d) A break in the continuity of a bone and tendon

Q.10. **A motor vehicle accident victim has open fracture of right leg, severe pain in neck, grade II shock. A trauma surgeon should:**

**a) Apply compression dressing to leg**

b) Transfuse one bottle of blood

c) Post for debridement of leg wound

d) Order CT -Scans of cervical spine

## Section – B

04X04 = 16 Marks

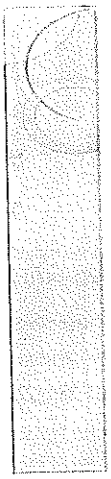
Q.1. **Describe the influencing factors of movement.**

| | |
|---|---|
| Biological factors | The age or stage of development of a person will influence their mobility. As children practice their motor skills, they become familiar with their environment, which is an important prerequisite site for developing their mental faculties. In addition, the body 's ability to move depends on a person 's general condition, muscle strength and state of health. The sick or those suffering with pain or disability, as a result, for example, of malnutrition, impaired cardiovascular performance or immobility, will be restricted in their mobility. |
| 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. |
| Sociocultural factors | An individual 's family and social life can influence their decision to undertake specific 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. |
| Environmental fac- tors | A person 's environment and living conditions will influence their behavior in terms of movement. Children living in cramped conditions with no real opportunity to spend time outside will not have much opportunity to indulge their natural appetite for movement. Those with restricted mobility are dependent on aids like a lift in an apartment block in order to leave their home. Climate and weather can also play a major role in people 's movement. |

Q.2. **Define kinesthetics. Write down the four differences between the open and closed fracture.**

**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). Kinaes- thetics refers to the study of the perception of movement. It is concerned with contact and perception. Kinaes- thetics favors natural, original and harmonious sequences of movements and promotes health and independ- ence.



## OPEN VS CLOSED

- Must describe to a consultant if fracture is open or closed
- Closed fracture
  - Simple fracture
  - No open wounds of skin near fracture
- Open fracture
  - Compound fracture
  - Cutaneous (open wounds) of skin near fracture site. Bone may protrude from skin
  - Open fractures are open complete displaced and/or comminuted

Q.3. **Describe the surgical treatment of fracture.**

**Surgical treatment, osteosynthesis:**

Distinctions are made between many different processes:

- **Pinning or wiring**
  - the fragments are held together with pins once aligned. A plaster cast is also applied in most cases (eg. fractures near the elbow). Plating: the fragments are fixed using a metal plate and screws The person can then work the extremity as instructed by a physiotherapist (eg. after a complicated fracture of the radius).
- Nailing a nail is inserted into the medullary cavity of rage tubular bones. The patient may put pressure on the extremity shortly afterwards (eg. after a fracture of the femur).
- **External fixation**
  - screw nails are inserted into the fragments and secured outside the body with cross bars (e.g. after a comminuted fracture of the shin bone).
- **Prosthetic joint replacement**
  - he head and/or socket of the joint are removed and replaced with an artificial prosthesis (eg. after a fracture of the femoral neck).

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 pro- cess on a regular basis as required
- The bell should be working properly and in easy reach
- The bed is set to its lowest level (dose 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 pa- tient 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)

## Section – C

04X06 = 24 Marks

Q.1. **Define rheumatoid arthritis. Write down the four causes, 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.

**Causes**

- Bacteria & Virus
- Age
- Family history
- Obesiy
- Environmental exposure

**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.2. **Define fall prevention. Write down the basic rules for dealing with people in a wheelchair.**

**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.

**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 requited 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.

Q.3. **Explain the decubitus prophylaxis.**

**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 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 sup- port 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. **Describe the ergonomics in the workplace.**

| Topic | Example / Remark |
|---|---|
| **Work Place**<br>As regards organizing the workplace, consideration is given to body mass, posture, body strength and freedom of movement | If you use the Computer in the ward office to docu- ment nursing routines, you should be able to adopt a correct sitting position. The tabletop should be level with your elbows. Forearms should lie as fiat as possible on the desk. Shoulders should not be hunched up. Make sure your eyes are a suitable dis-<br>tance (50—80 Cm) from the screen. |
| **Work equipment**<br>The way we use aids, tools, desks, office chairs and the like is important. | A good Chair needs to be height-adjustable with a backrest. It should be possible to vary the angle of<br>the seat. |

| | |
|---|---|
| **Working environment**<br>Checks are performed for noise emissions, mechan- ical vibrations, climate, lighting and color scheme. | 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<br>reflections from the lighting. |
| **Working hours**<br>In terms of working hours, it is a case of Checking the rules regarding breaks and any flexible hours or shift arrangements. | 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<br>good ways to revive both body and mind. |
| **Work organization**<br>In terms of work organization, it is a question of de- fining the content of work, divide group work and en- suring people take ownership. | The work expected from a person should be clearly defined. Failure to do so will lead to disagreements, overlap and dissatisfaction. |
| **Back-friendly working practices**<br>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. | 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 re-<br>sponsibility to keep your back healthy. |
| **Correct lifting**<br>Avoid lifting where possible. If you do need to lift a bad, however, use the power in your legs to per- form the lift and help relieve your back. Bend your knees and hips. Position yourself dose 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 move-<br>ments when lifting. | 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. |
| **Correct carrying**<br>Carry the bad dose to your body. The bad 's center of gravity should be vertically above the feet if possi- ble. Distribute the bad symmetrically, i.e. evenly be-<br>tween the left and right side. | Use a trolley to transport loads if possible rather than carrying them. |
| **Adjusting the working height** | When working low down, It is advisable to sit if at all<br>possible (eg. to measure blood pressure). |

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics**

**Session: 2021-22 (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. **All are the following are nutrients found in food except:**

a) Plasma b) Protein

c) Carbohydrate d) Vitamin

Q.2. **A substance needed by the body for growth, energy, repair and maintenance is called a.....?**

a) Carbohydrate b) Calories

c) Fatty acid d) Nutrients

Q.3. **According to the MyPyramid food guidelines system, a person should obtain most of their fat from.....?**

a) Beef, Chicken and Fish b) Vegetables, Oils, Nuts and Fish

c) Fat, Oils and Sweets d) Milk, Yogurt and Cheese

Q.4. **What do you mean by parenteral nutrition?**

a) By venous b) By oral

c) By artery d) By stomach

Q.5. **At the time of insertion of NG (Nasogastric) tube, the position given to the patient:**

a) Supine position b) High fowler's position

c) Prone position d) Sim's lateral position

Q.6. **Inflammation of urinary bladder termed as:**

a) Sepsis b) Urethritis

c) Bladder sepsis d) Cystitis

Q.7. **On the basis of body mass index (BMI), a person with a height of 150 cm and weight of 70kg is defined to be:**

a) Obese b) Overweight

c) Normal weight d) Under weight

Q.8. **A bland diet consists of:**

a) High carbohydrate and high fat b) Plenty of roughage

c) Non irritating food d) Both a and c

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Q.9. **Influential factors on nutrition. Food and drink play an important role in the daily lives of people of all age. which Influential factors on nutrition are as not following:**

a) Biological factor: Sense of smell and taste

b) Psychological factor: Eye sight disease or disability

c) Environmental factor: Decoration of the table

d) Environmental factor: Eating meals alone or with others

Q.10. **Special nutritional recommendations for elderly people:**

a) Nutrition in accordance with the food pyramid in order to prevent deficiency symptoms.

b) Adapt the supply of energy in line without activities

c) Do not herbs to good flavour to dishes and present them attractively to stimulate the appetite

d) Ensure that people have no company when eating.

## Section – B

04X04 = 16 Marks

Q.1. Write down the nutrition requirement for elderly person and young baby.

Q.2. Weight of a man is 90 kg and height is 185 cm. Calculate his BMI using the formula and indicate the Condition.

Q.3. Describe the influencing factors of nutrition.

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

## Section – C

04X06 = 24 Marks

Q.1. What do you mean by dysphagia? Write down the Six causes and nursing measures of dysphagia.

Q.2. Write down the care measures or trans nasal tube and PEG.

Q.3. Define obstipation. Write down the six causes, symptom and treatment of obstipation.

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

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skils**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

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d) Ensure that people have no company when eating.

## Section – B

04X04 = 16 Marks

Q.1. **Write down the nutrition requirement for elderly person and young baby.**

**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 ate 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 some-times.

**Young baby.**

A young baby receives the required nutrients from breast milk or substitute products i.e. in liquid form. The baby is completely dependent on the help of others in this activity.

Q.2. **Weight of a man is 90 kg and height is 185 cm. Calculate his BMI using the formula and indicate the Condition.**

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

BMI = 90/3.42= 26.31

The condition is Normal

Q.3. **Describe the influencing factors of nutrition.**

**Influential factors on nutrition**

Food and drink play an important role in the daily lives of people of all age. Influential factors on nutrition are as following

| | |
|---|---|
| Biological factors | • Age<br>• Physical state, e.g. pain, appetite or feeling of hunger<br>• Functional efficiency of the digestive System<br>• Physical activity and personal basal metabolic rate<br>• Senses of smell and taste<br>• Eyesight Diseases or disabilities |
| Psychological factors | • State and mood at the time in question<br>• Personal habits, preferences and dislikes<br>• Visual appeal of food<br>• Mental and intellectual capabilities<br>• Fears, e.g. the food could be poisoned |
| Environmental factors | • Tidiness or arrangement in the room and on the table<br>• Location where food is being eaten, e.g. at a table or in bed<br>• Range and variety of food<br>• Quality of the food and drinking water<br>• Decoration of the table |

Q.4 **Write down the general principles of supporting 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. **What do you mean by dysphagia? Write down the Six causes and nursing measures of dysphagia.**

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. **Write down the care measures or trans nasal tube and PEG.**

**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 perma- nent 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, in- creased 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.

**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.

Q.3. Define obstipation. Write down the six causes, symptom and treatment of obstipation.

**Obstipation**

The term 'obstipation ', or severe constipation, refers to problematic and delayed bowel evacuation, often associated with hard stools and painful defecation. Obstipation is a symptom rather than an actual disease.

**Causes/risk factors**

- lack of exercise
- the wrong kind of nutrition
- side effects of medication, e.g. opiates, antacids, anticholinergics
- psychological causes, e.g. scruffy, unhygienic toilet or feelings of shame
- surgery involving the abdominal cavity
- Pregnancy
- hemorrhoids
- tumors
- anal fissures.
- depression
- multiple sclerosis
- Parkinson 's disease medication (e.g. morphine and similar analgesics).

**Symptoms**

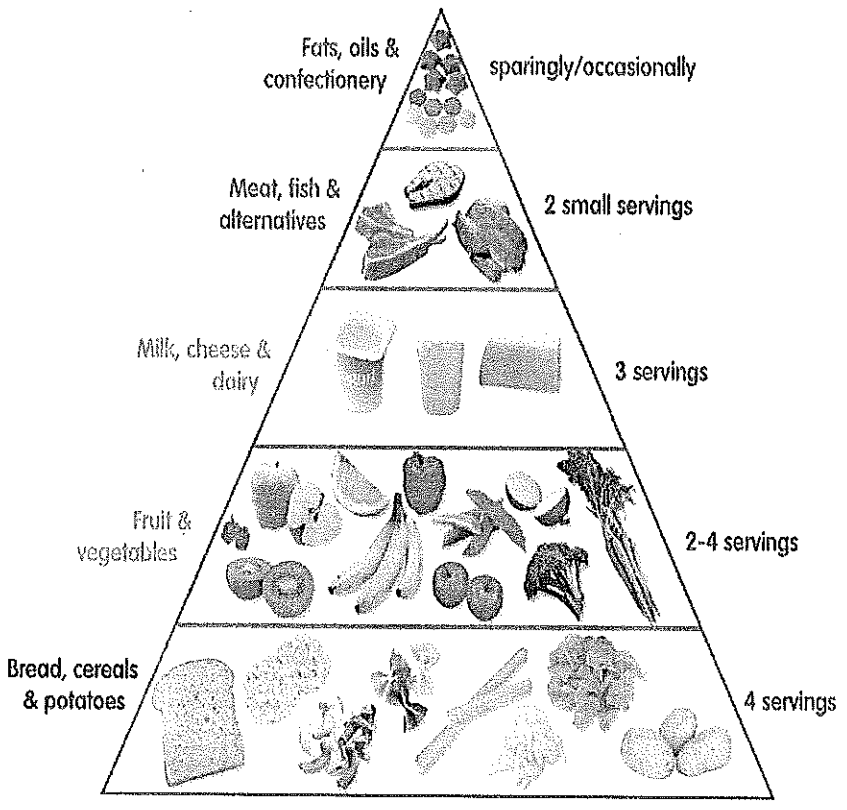
- Infrequent defecation
- Dry, knotty, hard stools
- Pain during defecation
- Abdominal pain, flatulence, feeling full, loss of appetite

**Treatment**

- Treatment of the underlying disease
- Change of diet: high-fiber food with wheat bran, sufficient fluid intake (eg. fennel tea), avoiding stodgy food
- Physical exercise
- Abdominal massage to stimulate peristalsis
- Measures to promote discharge: laxatives, enemas, clysters

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

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



| | |
|---|---|
| Drinks | Mineral water, herbal tea, green tea, diluted fruit juice, tap water<br>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 requirements. |
| Fruit and vegetables | Cucumber, onions, red cabbage, broccoli, apples, pineapple, pears<br>Fruit and vegetables provide many vitamins, minerals. We should consume five portions 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. |
| Grain products, pulses and potatoes | Bread, maize, pasta, rice, millet, barley, potatoes, soya, chickpeas<br>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 bioactive compounds. We should eat a portion from this group at every main meal. 1 portion = approx. 100 g of bread or 200—3009 of potatoes or 709 of pasta or cereal. |
| Milk and dairy products | Yoghurt, soft cheese, milky drinks, hard cheese, soured milk<br>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 1809 of yoghurt or 2009 of cottage cheese or 40 g of cheese. Caution: the fat content of dairy products varies. |
| Meat, fish, eggs, cheese and sources of vegetable protein | trout, meat, fried egg, seafood<br>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. 1 portion= 100gofmeator2—3eggs or 2009 of Quorn or 120g of Tofu. |
| Oils and fats and nuts | Olive oil milk fat, sunflower seeds, rapeseed oil, avocado, butter<br>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 teaspoons of spreadable fat (e.g. butter). |
| Confectionery, salted snacks and high-energy drinks | Chocolate, salted peanuts, energy drinks, alcohol, ice cream, sugar lumps, cola, rasgulla other Indian sweets.<br>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. |

K. Kou

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (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. **Most common cause of excessive fluid excretion?**

a) Physical exertion
b) Normal body temperature
c) Taking medicine against blood pressure
d) Hypoglycemia

Q.2. **Which of these is "NOT" considered a nutrient:**

a) Vitamin
b) Minerals
c) Fiber
d) Fats

Q.3. **According to the MyPyramid food guidelines system, a person should obtain most of their fat from.....?**

a) Beef, Chicken and Fish
b) Vegetables, Oils, Nuts and Fish
c) Fat, Oils and Sweets
d) Milk, Yogurt and Cheese

Q.4. **Loss of appetite is known as:**

a) Apnea
b) Dysphasia
c) Anorexia
d) Atrexia

Q.5. **At the time of insertion of NG (Nasogastric) tube, the position given to the patient:**

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

Q.6. **What do you mean by enteral nutrition?**

a) By venous
b) By subcutaneous
c) By oral
d) By inhalation

Q.7. **On the basis of body mass index (BMI), a person with a height of 178 cm and weight of 50kg is defined to be:**

a) Obese
b) Overweight
c) Normal weight
d) Under weight

Q.8. **Specific gravity of urine is measured by:**

a) Urometer
b) Urinary bag
c) Urinary catheter
d) All of above

Q.9. **Which of these is a common cause of diarrhoea?**

a) Contamination of water
b) Viral infection
c) Intolerance of milk
d) All of these

Q.10. **Special nutritional recommendations for elderly people:**

a) Nutrition in accordance with the food pyramid in order to prevent deficiency symptoms.
b) Adapt the supply of energy in line without activities
c) Do not herbs to good flavour to dishes and present them attractively to stimulate the appetite
d) Ensure that people have no company when eating.

## Section – B

04X04 = 16 Marks

Q.1. Write down the nutrition requirement for young child and adolescent.
Q.2. Weight of a man is 45 kg and height is 145 cm. Calculate his BMI using the formula and indicate the Condition.
Q.3. Draw the chart of food pyramid.
Q.4 Write down the general principles of supporting nutritional intake.

## Section – C

04X06 = 24 Marks

Q.1. What do you mean by nutrition deficiency? Describe the causes of loss of appetite and food refusal.
Q.2. Define nausea. Write down the causes of cerebral and reflexive vomiting and nursing measures of aspiration.
Q.3. Define obstipation. Write down the six causes, symptom and treatment of obstipation.
Q.4. Elaborate the principles of using aids.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

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**End-Sem. Examination**

**Course Code: SHP1104** **Time: 2 Hours**

**Course Name: Nutrition & Elimination I** **Max. Marks: 50**

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**c) Fiber** d) Fats

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c) Fat, Oils and Sweets d) Milk, Yogurt and Cheese

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**a) Nutrition in accordance with the food pyramid in order to prevent deficiency symptoms.**

b) Adapt the supply of energy in line without activities

c) Do not herbs to good flavour to dishes and present them attractively to stimulate the appetite d) Ensure that people have no company when eating.

## Section – B

04X04 = 16 Marks

Q.1. **Write down the nutrition requirement for young child and adolescent.**

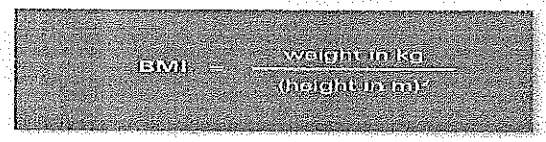
**Young child/ child**

Small children learn to eat semi-solid food with the help of a spoon. They still need help with this. Special drinking cups and straws are used initially for drinking. The child first learns to use the spoon independently. The diet is gradually supplemented with solid foods.

**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.

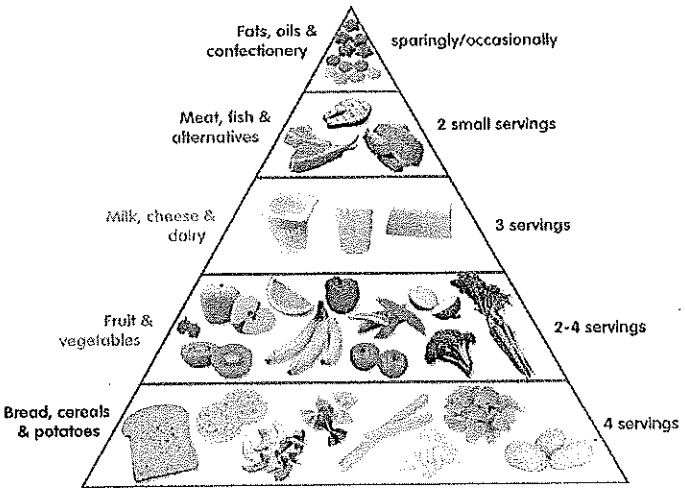
Q.2. Weight of a man is 45 kg and height is 145 cm. Calculate his BMI using the formula and indicate the Condition.




BMI = 45/2.10= 21.42

The condition is Normal

Q.3. Draw the chart of food pyramid.




Q.4 Write down the general principles of supporting 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. What do you mean by nutrition deficiency? Describe the causes of loss of appetite and food refusal.

**Nutritional deficiency**

A nutritional deficiency is first noticed when somebody is delayed to recovery, susceptibility to infections, weight loss, weakness in performance, difficulties in concentrating, feeling cold, dry and wrinkled skin, dull hair, hair boss, and eye sight problems. All of these symptoms can be observed during daily nursing and care. The following causes are often encountered:

**Loss of appetite**

| Physical Causes | Emotional Causes | Other Causes |
|---|---|---|
| • Fever, Pain<br>• Digestive Disorders<br>• Reduced Sense of smell ortaste<br>• Dysphagia<br>• Dislike of food due to specific disease<br>• Nausea or Vomiting<br>• Restricted Mobility | • Psychological Disorders<br>• Emotional Stress<br>• Conflict Worry<br>• Eating Disorders(Anorexia)<br>• Boredom | • Gastric Tube<br>• Medication (Cytostatic)<br>• Atmosphere (Unpleasant company, Indoor Climate) |

**Food refusal**

Food refusal is associated with many emotions. When a person refuses food and/or drink, it is important to establish whether it is a case of being unwilling to eat or drink, or no longer able to eat or drink. A number of possible causes are shown in the table below.

| Physical Causes | Emotional Causes | Other Causes |
|---|---|---|
| • Pathological disorders in the mouth and GIT<br>• Pain<br>• Swallowing Difficulty<br>• fatigue, Dementia<br>• e) Lack of Exercise | • Homesickness<br>• Unpleasant Environment<br>• Aggression<br>• Anxiety<br>• e) eating Disorders | • Dislike of certain foods or drinks<br>• Restricted range of foods on offer<br>• Uncomfortable sitting position for eating<br>• Antipathy towards the nurse offering the food or drink<br>• e) Process of dying |

Q.2. **Define nausea. Write down the causes of cerebral and reflexive vomiting and nursing measures of aspiration.**

**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.

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

**Reflexive vomiting**

the vomiting centre 5 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

**Nursing measures for aspiration and the risk of aspiration**

**If aspiration occurs, you must always act immediately; there is no time to lose!**

- Activate the emergency alarm.
- Get the person affected to lean the upper body forward and cough hard.
- Support the coughing process by applying pressure on the sides.
- Keep calm and do not allow yourself to panic.
- Do not thump the patient on the back, since this can cause the food to slip even further down.
- If the food which has entered the airways does not come back up, the qualified nursing professional will clear the airways using suction.
- Foreign bodies often need to be removed in hospital under a general anaesthetic.

Q.3. **Define obstipation. Write down the six causes, symptom and treatment of obstipation.**

**Obstipation**

The term 'obstipation ', or severe constipation, refers to problematic and delayed bowel evacuation, often associated with hard stools and painful defecation. Obstipation is a symptom rather than an actual disease.

**Causes/risk factors**

- lack of exercise
- the wrong kind of nutrition
- side effects of medication, e.g. opiates, antacids, anticholinergics
- psychological causes, e.g. scruffy, unhygienic toilet or feelings of shame
- surgery involving the abdominal cavity
- Pregnancy
- hemorrhoids
- tumors
- anal fissures.
- depression
- multiple sclerosis
- Parkinson 's disease medication (e.g. morphine and similar analgesics).

**Symptoms**

- Infrequent defecation
- Dry, knotty, hard stools
- Pain during defecation
- Abdominal pain, flatulence, feeling full, loss of appetite

**Treatment**

- Treatment of the underlying disease
- Change of diet: high-fiber food with wheat bran, sufficient fluid intake (eg. fennel tea), avoiding stodgy food
- Physical exercise
- Abdominal massage to stimulate peristalsis
- Measures to promote discharge: laxatives, enemas, clysters

Q.4. **Elaborate the principles of using excretion aids.**

**Principles for using aids**

Accompanying people to the toilet. When accompanying patients to the toilet, please bear in mind the following:

- Ensure the toilet is clean and unoccupied. There must be enough toilet paper/water
- The floor must be dry given the risk of falls
- Move any obstacles out of the way (furniture, cables, laundry trolleys etc.).
- Depending on their mobility and resources help the patient get out of bed and stand up and assist them as they make their way to the toilet.
- Make sure footwear is safe.
- Make sure the patient is dressed (shirt, dressing gown etc.).
- Help the patient with undressing and sitting down on the toilet as required.
- Provide assistance with intimate care or dressing as require

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**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1105** **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. **An adult is declared to be obese if the BMI is more than:**

a) 35 b) 30

c) 20 d) 25

Q.2. **Persistent lack of appetite often occurring with vomiting and severe weight loss is referred to as:**

a) Stuttering b) Pica

c) Bulimia nervosa d) Anorexia nervosa

Q.3. **All the following are sign of anorexia nervosa, except:**

a) Frequently eating habit b) Dry hair and skin

c) Fatigue d) Anxious and hopeless look

Q.4. **Psoriasis vulgaris is a chronic inflammatory skin disease associated with an immunological response. Chose the right symptom:**

a) No sign of psoriasis b) No itchy sign

c) Oily skin d) Blister

Q.5. **The most common cause of urinary tract infection (UTI) into community is:**

a) E. coli b) Klebsiella

c) Citrobactor d) Proteus vulgaris

Q.6. **Pollen dust is which type of allergy?**

a) Food allergy b) Inhaled allergy

c) Injected allergy d) Contact allergy

Q.7. **Which of the following is not considered a portal of entry for bacteria?**

a) Eyes b) Nose

c) Mouth d) Intact skin

Q.8. **Droplet infection transmitted by:**

a) By blood transfusion b) Direct contact

c) Sneezing and coughing d) All of above

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Q.9. **Inflammation of the urinary bladder is termed as:**

a) Sepsis

b) Urethritis

c) Cystitis

d) Bladder sepsis

Q.10. **Which type of food provide the dysphagia patient?**

a) Peanut better

b) Cottage cheese

c) Biscuits

d) Both a and b

## Section – B

04X04 = 16 Marks

Q.1. Write down the difference between the endogenous and exogenous.

Q.2. How to prevention of nosocomial infection?

Q.3. Explain the four symptoms of fungal disease.

Q.4. Describe the risk factors of allergies.

## Section – C

04X06 = 24 Marks

Q.1. What do you mean dysphagia? Write down the eight causes and nursing measures of dysphagia.

Q.2. Define eating disorder. What are the difference between the anorexia and bulimia nervosa?

Q.3. Define dry skin. Write down the four causes, symptoms, and prevention of dry skin.

Q.4. Explain UTI.

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c) Biscuits

**d) Both a and b**

## Section – B

04X04 = 16 Marks

Q.1. **Write down the difference between the endogenous and exogenous.**

| Endogenous | Exogenous |
|---|---|
| • patient own flora may invade patients' tissue during some surgical operations | • From another patient, staff member and environment in the hospital<br>• Environment source: air, water, and food |

Q.2. **How to prevention of nosocomial 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.3. **Explain the four symptoms of fungal disease.**

| | |
|---|---|
| **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. **Describe the risk factors of allergies.**

**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). |

## Section – C

04X06 = 24 Marks

Q.1. **What do you mean dysphagia? Write down the eight causes and nursing measures of dysphagia.**

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 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

Q.2. **Define eating disorder. What are the difference between the anorexia 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. |

| Anorexia nervosa | Bulimia nervosa |
|---|---|
| • Strong compulsion to exercise<br>• Hypersensitivity to cold<br>• Reduced productivity, Chronic fatigue<br>• Problems concentrating<br>• Depression with risk of suicide | • Feelings of shame and guilt because of the binge eating<br>• Body weight fluctuates more than of anorexia nervosa and is usually significantly higher<br>• Reduced productivity, Chronic fatigue<br>• Problems concentrating<br>• Changes to the teeth are typical due to the frequent vomiting<br>• Episodes of weakness<br>• Gastrointestinal disorders<br>• Cardiac irregularities<br>• Depression with risk of suicide |

Q.3. **Define dry skin. Write down the four causes, symptoms, and 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.

**Causes**

- Age
- Medical history
- Season
- Bathing habits

**Symptoms of Dry Skin**

- Excessive thirst
- Fast heart rate
- Dehydration
- Rash
- Skin lesion

- Dry mouth

**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

Q.4. **Explain 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

**Diagnosis of UTI**

- History collection
- Blood test
- Urine culture

**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.

K. Kaur

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**End-Sem. Examination**

**Course Code: SHP1105** **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. **Where do the microbes come from?**

a) Food b) Paper

c) Ventilator d) Wood

Q.2. **A behavioral disorder in which a client consume large amount of food is referred to:**

a) Stress disorder b) Pica

c) Bulimia nervosa d) Anorexia nervosa

Q.3. **BMI of 34 indicate which status?**

a) Obesity b) Malnutrition

c) Overweight d) Normal

Q.4. **Psoriasis vulgaris is a chronic inflammatory skin disease associated with an immunological response. Chose the right symptom:**

a) No sign of psoriasis b) No itchy sign

c) Oily skin d) Blister

Q.5. **The most common cause of urinary tract infection (UTI) into community is:**

a) E. coli b) Klebsiella

c) Citrobactor d) Proteus vulgaris

Q.6. **Nickle is which type of allergy?**

a) Food allergy b) Inhaled allergy

c) Injected allergy d) Contact allergy

Q.7. **What is the cause of underweight?**

a) A high metabolic b) Low metabolic

c) Eat healthy d) Do not sport

Q.8. **What is most common prevention of urinary tract infection:**

a) Hygiene is not so important

b) Do not maintain hygiene method after using urinating and disinfection

c) To use a catheter method as long as possible is not a big thing

d) Never hold the urine

Q.9. **Nosocomial infection is:**

a) It has nothing to do with the health care branch

b) It is only important in theory

c) It is a hospital acquired infection

d) Health Care professional can do nothing against

Q.10. **Which type of food avoid the dysphagia patient?**

a) Biscuit

b) Rusks

c) Peanut better

d) Both a and b

## Section – B

04X04 = 16 Marks

Q.1. Write the treatment of fungal disease.

Q.2. How to prevention of nosocomial infection?

Q.3. What is the difference between the acute and chronic diarrhea?

Q.4. Describe the risk factors of allergies.

## Section – C

04X06 = 24 Marks

Q.1. What do you mean allergies? Describe the Symptom of allergies.

Q.2. Define eating disorder. Describe the treatment of underweight.

Q.3. Define dry skin. Write down the four causes, symptoms, and prevention of dry skin.

Q.4. Explain constipation.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1105** **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. **Where do the microbes come from?**

a) Food b) Paper

**c) Ventilator** d) Wood

Q.2. **A behavioral disorder in which a client consume large amount of food is referred to:**

a) Stress disorder b) Pica

**c) Bulimia nervosa** d) Anorexia nervosa

Q.3. **BMI of 34 indicate which status?**

**a) Obesity** b) Malnutrition

c) Overweight d) Normal

Q.4. **Psoriasis vulgaris is a chronic inflammatory skin disease associated with an immunological response. Chose the right symptom:**

a) No sign of psoriasis b) No itchy sign

c) Oily skin **d) Blister**

Q.5. **The most common cause of urinary tract infection (UTI) into community is:**

**a) E. coli** b) Klebsiella

c) Citrobactor d) Proteus vulgaris

Q.6. **Nickle is which type of allergy?**

a) Food allergy b) Inhaled allergy

c) Injected allergy **d) Contact allergy**

Q.7. **What is the cause of underweight?**

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a) Biscuit

b) Rusks

c) Peanut better

**d) Both a and b**

## Section – B

04X04 = 16 Marks

Q.1. **Write the treatment of fungal disease.**

**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 malts, stimulate saliva, mouthwash after using asthma sprays containing cortisone).

Q.2. **How to prevention of nosocomial 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.3. **What is the difference between the acute and chronic diarrhea?**

| Acute diarrhoea | Chronic diarrhoea |
|---|---|
| • GI infections involving bacteria, virus, fungi, parasite (e.g. norovirus, salmonella, coliform bacteria)<br>• Food poisoning<br>• Side effects of medication (e.g. antibiotics, cytostatic)<br>• Laxative use<br>• Psychological influences (e.g. anxiety, stress). | • Chronic inflammatory intestinal diseases (e.g. Crohn 's disease, ulcerative colitis)<br>• Food intolerance<br>• Irritable bowel syndrome<br>• Laxative abuse<br>• Hormonal problems (e.g. hyperthyroidism).<br>• No cause can be found in many cases of chronic diarrhoea. |

Q.4. **Describe the risk factors of allergies.**

**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). |

## Section – C

04X06 = 24 Marks

Q.1. **What do you mean allergies? Describe the Symptom 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

**Symptoms**

**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.2. **Define eating disorder. Describe the treatment of underweight.**

**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. |

**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. **Define dry skin. Write down the four causes, symptoms, and 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.

**Causes**

- Age
- Medical history
- Season
- Bathing habits

**Symptoms of Dry Skin**

- Excessive thirst
- Fast heart rate
- Dehydration
- Rash
- Skin lesion
- Dry mouth

**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

Q.4. **Explain constipation.**

**Constipation**

Constipation is a condition of the digestive system where an individual has hard faeces that are difficult to expel. In most cases, this occurs because the colon has absorbed too much water from the food that is in the colon.

**Causes**

- Physical inactivity
- Medications
- Milk
- Irritable bowel syndrome
- Pregnancy
- Aging

- Changes in routine

- Overuse of laxatives
- Not going to the toilet when needed
- Not drinking enough water
- Problems with the colon or rectum

**Symptoms**

- The main symptoms of constipation are increased difficulty and straining when passing stools.
- stomach ache
- stomach cramps
- feeling bloated and nauseous
- losing appetite

**Prevention of Constipation**

- High fiber diet
- Regular private toilet routine
- Use a laxative if using constipating medication
- Minimum fluid consumption of 1500ml/day

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1106** **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 pulse is palpated to see the effectiveness of CPR?**

a) Radial b) Temporal

c) Carotid d) Femoral

Q.2. **In case of accident what would you first examine?**

a) Patent airway b) Hemorrhage

c) Fracture d) Possible head injury

Q.3. **What is the best treatment of second degree of burn?**

a) Put aloe vera lotion on it b) Water

c) Put ice on the burn d) Cover with sterile bandage

Q.4. **What first aid should you give to someone who is having a heart attack?**

a) Call 108 b) Perform CPR

c) Loosen his/her clothes d) All of above

Q.5. **What is your first action when examining the condition of a patient?**

a) Check for breathing b) Check for insurance

c) Speak to the victim and shake his shoulders d) Check for external injuries

Q.6. **What is a scold?**

a) A burn by liquid or gas b) A burn by fire

c) A break in your leg d) Being beaten with a stick

Q.7. **When you come across a person lying unresponsive on the road, your first action should be to:**

a) Leave the person to wake up by himself

b) Make the person to sit

c) Call an ambulance and start CPR

d) Make the person to lie on one side

Q.8. **What should you do to help someone who is choking?**

a) Encourage them to breathe through their nose

b) Help them drink some water to dislodge the object

c) Hit them firmly on their back between the shoulder blades

d) Start CPR

Q.9. **Elastic bandages are used:**

a) To control bleeding

b) Control swelling and support injuries such as sprains and strains

c) To allow circulation to a severed limb

d) When applying a splint

Q.10. **What do you do for small cut?**

a) Wash with soap and water, cover with sterile bandage

b) Only cover with a sterile bandage

c) Clean the wound with cotton wool

d) Only Wash with plain water

## Section – B

04X04 = 16 Marks

Q.1. Define injuries. Describe the amputation, abrasions, and contusion.

Q.2. Describe the four causes of difficulty of breathing.

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

Q.4 Define first aid. Write down the aims of **"First Aid"**.

## Section – C

04X06 = 24 Marks

Q.1. Define burn. Explain the care of minor burn.

Q.2. How to perform CPR in adults?

Q.3. Describe the recovery position to provide unconscious patient.

Q.4. What do you mean by transport technique? Explain the cradle technique, Pick – A- back technique, Hand seat technique and kitchen – chair carry technique.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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b) Only cover with a sterile bandage

c) Clean the wound with cotton wool

d) Only Wash with plain water

## Section – B

04X04 = 16 Marks

Q.1. **Define injuries. Describe the amputation, abrasions, and contusion.**

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.

**Amputations**

Amputation is the removal of a limb by trauma. Re-attachment of amputated limbs, fingers or toes might be possible if the injured and the amputated part(s) arrive at the hospital as soon as possible.

**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,

Q.2. **Describe the four causes of difficulty of breathing.**

**CAUSES OF NO BREATHING**

**CONDITIONS AFFECTING THE AIR PASSAGE**

**OBSTRUCTION OF THE AIR PASSAGE**

foreign body inhalation- as a coin inhaled by a child or artificial tooth by an adult;

food going down the air passage;

sea weeds, mud or water getting into air passage during drowning;

bronchial asthma;

tongue falling back in an unconscious person;

swelling of tissues of the throat as a result of scalding (burning by steam or boiling fluids or corrosives) or allergic reactions;

inhaling irritant gases (coal gas, motor exhaust fumes, smoke, sewer and closed granary gas or gas in a deep unused well, etc.).

**COMPRESSION OF THE AIR PASSAGE (USUALLY DELIBERATE, SOMETIMES ACCIDENTAL)**

Smothering such as covering of the face and nose of an infant or an unconscious person lying face downwards on a pillow, or having a plastic bag covering the face of the victim,

tying a rope or scarf tightly around the neck causing strangulation,

hanging or throttling (applying pressure with fingers on the windpipe).

**CONDITIONS AFFECTING THE RESPIRATORY MECHANISM**

Epilepsy, tetanus, rabies, etc.;

nerve diseases causing paralysis of the chest wall or diaphragm;

poisonous bites (e.g. snake bites like the cobra).

**CONDITIONS AFFECTING RESPIRATORY CENTRE**

Overdose of morphia or similar products such as barbiturates (sleeping tablets,

electric shock,

stroke.

**COMPRESSION OF THE CHEST**

Caving in of earth or sand in mines, quarries, pits or compression by grain in a silo or by beams or pillars in house-collapse;

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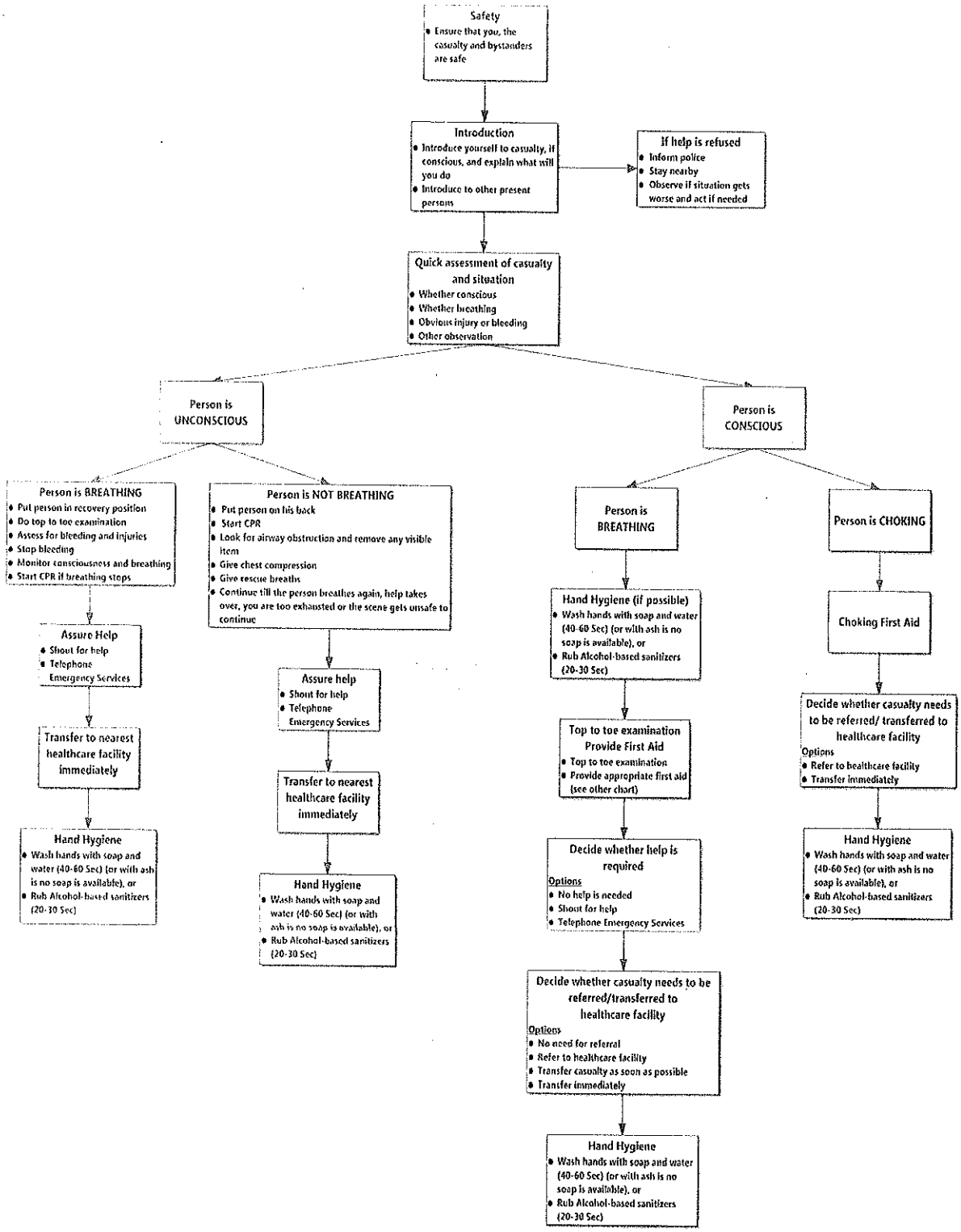
Q.3. Draw the first aid overview flow chart.



**Q.4 Define first aid. Write down the aims of "First Aid".**

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.

AIMS OF FIRST AID

The aims of first aid are:
to preserve life,
to prevent the worsening of one's medical condition,
to promote recovery, and
to help to ensure safe transportation to the nearest healthcare facility.

## Section – C

04X06 = 24 Marks

**Q.1. Define burn. Explain the care of minor burn.**

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!

**CARE OF MINOR BURNS (SMALL FIRST AND SECOND DEGREE BURNS)**

For minor burns (small first and second degree burns) you can use fresh aloe vera or honey if available to cover the burn wound. This will help the wound to heal faster.

HYGIENE

Wash your hands before taking care of the sick person. Use soap and water to wash your hands. If no soap is available, you can use ash to wash your hands. Alcohol- based sanitizers can also be used, if available.

Use gloves to protect yourself. If no gloves are available, you can use a clean plastic bag. Try not to come in contact with the person's vomit, stools or fluids.

PROVIDE FIRST AID

After cooling down the burn wound (see above on how to approach the casualty):

Dress the wound with a clean cotton cloth.

Do not apply any medicine to the burns.
Do not apply cotton wool to cover the burns. Do not use Vaseline to cover the burns.
Do not apply any pastes or creams to the burns.

Make sure the burned casualty has sufficient fluids to drink.

Refer the victim to a healthcare facility for further management.

**WHEN TO REFER A BURN VICTIM TO A HEALTHCARE FACILITY OR HOSPITAL?**

Always refer the victim to a healthcare facility for further management. Advise the injured person to seek medical care if in the days after:

The burn smell bad,
There Is Any Discharge From The Wound Or The Wound Is Soaked With Pus, The pain remains or increases, There is Swelling ,Or If he get sfever.

Q.2. **How to perform CPR in adults?**

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.

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.

**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 loose 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.3. **Describe the recovery position to provide unconscious patient.**

**RECOVERY POSITION**

The recovery position refers to a lateral prone position of the body, in to which an unconscious but breathing normally casualty can be placed as part of the first aid treatment.

In an unconscious person, the muscles are relaxed. This causes the tongue to obstruct the airway. This risk can be eliminated by carefully tilting the head back and lifting the chin. The recovery position should be used for unconscious casualties who are breathing.

The position of the casualty's arms and legs provide the necessary stability to keep the body in a safe and comfortable position.

Unblocking the breathing passage takes priority over concerns about a potential spinal injury. Unless you can clearly see that the person is breathing normally, an unconscious person must be turned onto his back to unblock the breathing passage and to check breathing.

**HOW TO PUT A PERSON INTO THE RECOVERY POSITION?**

***SAFETY FIRST AND CALL FOR HELP***

1. Make sure there is no danger to you, the person who needs help and bystanders before giving help.
2. The victim needs urgent help. If not yet done, 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 that help has been secured.

*HOW TO PUT A PERSON INTO THE RECOVERY POSITION*

3. Put the person on the floor if he is not there already.
4. Remove the person's spectacles if necessary.
5. Kneel down by the side of the casualty.
6. Make sure both of his legs are outstretched.
7. Place the nearest arm (the one on the side you are kneeling next to) at right angles to his body.
8. Bend the forearm upwards with palm facing up. Lay the person's other arm across his ches Hold the back of this hand against his cheek on the side at which you are kneeling.
9. Keep that hand in that position.
10. With your other free hand, grasp the leg on the other side of the person's body under the knee.
11. Raise that leg, but leave the person's foot on the ground.
12. Pull the raised leg towards you.
13. In the meantime, keep the back of the person's hand held against his cheek. Roll the person towards you so he turns on his side pull leg figure
3. Position the person's upper leg in such a way that his hip and knee are at right angles.
4. The person is now in a turned position and will not turn on his back.
5. Tilt the head of the person backwards to keep the airway open.
6. Make sure the mouth is angled towards the ground. This will prevent the risk of choking on blood or vomit.
7. Adjust the hand under the cheek if necessary so that the head remains tilted backwards and the mouth remains at a downward angle.

   ⓘ A casualty lying position is commonly referred to in the 'recovery position'

8. Do not leave a casualty alone and continue observing his condition and monitoring his breathing. If the person stops breathing, start resuscitation (see resuscitation).

Q.4. **What do you mean by transport technique? Explain the cradle technique, Pick – A- back technique, Hand seat technique and kitchen – chair carry technique.**

**TRANSPORT TECHNIQUES**

After appropriate first aid has been given, the patient may need to be transported.

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 haemorrhage, and
any signs of changes or worsening of the casualty's condition.

The transport must be safe, steady and speedy.
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, ...); or
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.

CRADLE TECHNIQUE

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.

PICK-A-BACK TECHNIQUE

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

HAND SEAT TECHNIQUES

Also known as the four-handed seat technique. This seat is used when the casualty can assist the 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 casually 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 casually 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 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

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1106** **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. **What is the symptom of third-degree burn?**

a) Charred skin and no pain
b) Blister and pain
c) Gray and pain
d) Red and pain

Q.2. **How should you open the airway of an unconscious casualty?**

a) Jaw thirst
b) Head tilt and jaw thirst
c) Lift the chin
d) Head tilt and chin lift

Q.3. **How do check for breathing?**

a) Listen
b) Look for rising chest
c) Feel with the cheek
d) Look, listen, and feel

Q.4. **How many compressions and breathing should you do for each cycle of CPR?**

a) 15 compressions and 2 breaths
b) 30 compression and 1 breath
c) 30 compression and 2 breath
d) Only 30 compression

Q.5. **What is a scold?**

a) A burn by liquid or gas
b) A burn by fire
c) A break in your leg
d) Being beaten with a stick

Q.6. **What is the purpose "Heimlich" Procedure?**

a) To treat the absence of victims breathing
b) To remove a blockage in the victims' airway
c) To treat an insufficient breathing
d) To re - locate (Move) the person

Q.7. **What should you 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 of broken
d) Check for level of response

Q.8. **Elastic bandages are used:**

a) To control bleeding

b) Control swelling and support injuries such as sprains and strains

c) To allow circulation to a severed limb

d) When applying a splint

Q.9. **What should you do to help someone who is choking?**

a) Encourage them to breathe through their nose

b) Help them drink some water to dislodge the object

c) Hit them firmly on their back between the shoulder blades

d) Start CPR

Q.10. **What is the first think you should do for severe bleeding?**

a) Put the victim in recovery position

b) Direct pressure with clothes and hand

c) Direct pressure with clean clothes

d) Give him water if conscious explanation stop the bleeding as soon as possible

## Section – B

04X04 = 16 Marks

Q.1. What do you mean by dry burn and chemical burn?

Q.2. What do you do after drowning victim?

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

Q.4 Define first aid. Write down the difference between the adhesive and non-adhesive dressing.

## Section – C

04X06 = 24 Marks

Q.1. Define hypothermia. What are the first aid for **"Hypothermia"** Patient?

Q.2. How to perform CPR in adults?

Q.3. How to deal with emergency situation.

Q.4. What do you mean by transport technique? Explain the shoulder pull technique, human crutch technique, blanket lift technique and kitchen – chair carry technique.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1106** **Time: 2 Hours**

**Course Name: First Aid, CPR and Palliative Care** **Max. Marks: 50**

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a) To treat the absence of victims breathing **b) To remove a blockage in the victims' airway**

c) To treat an insufficient breathing d) To re - locate (Move) the person

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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 of broken**

d) Check for level of response

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

- A victim is in the water and is in distress.
- Following signs of drowning may be observed:
- no breathing;
- difficulty in breathing and signs ofrestlessness;
- the rate of breathing increases;
- the breaths get shorter;
- the veins of the neck become swollen;
- the face, lips, nails, fingers and toes turn blue;
- the pulse gets faster and feebler; and
- water may gush from themouth.

①

**WHAT DO I DO?**

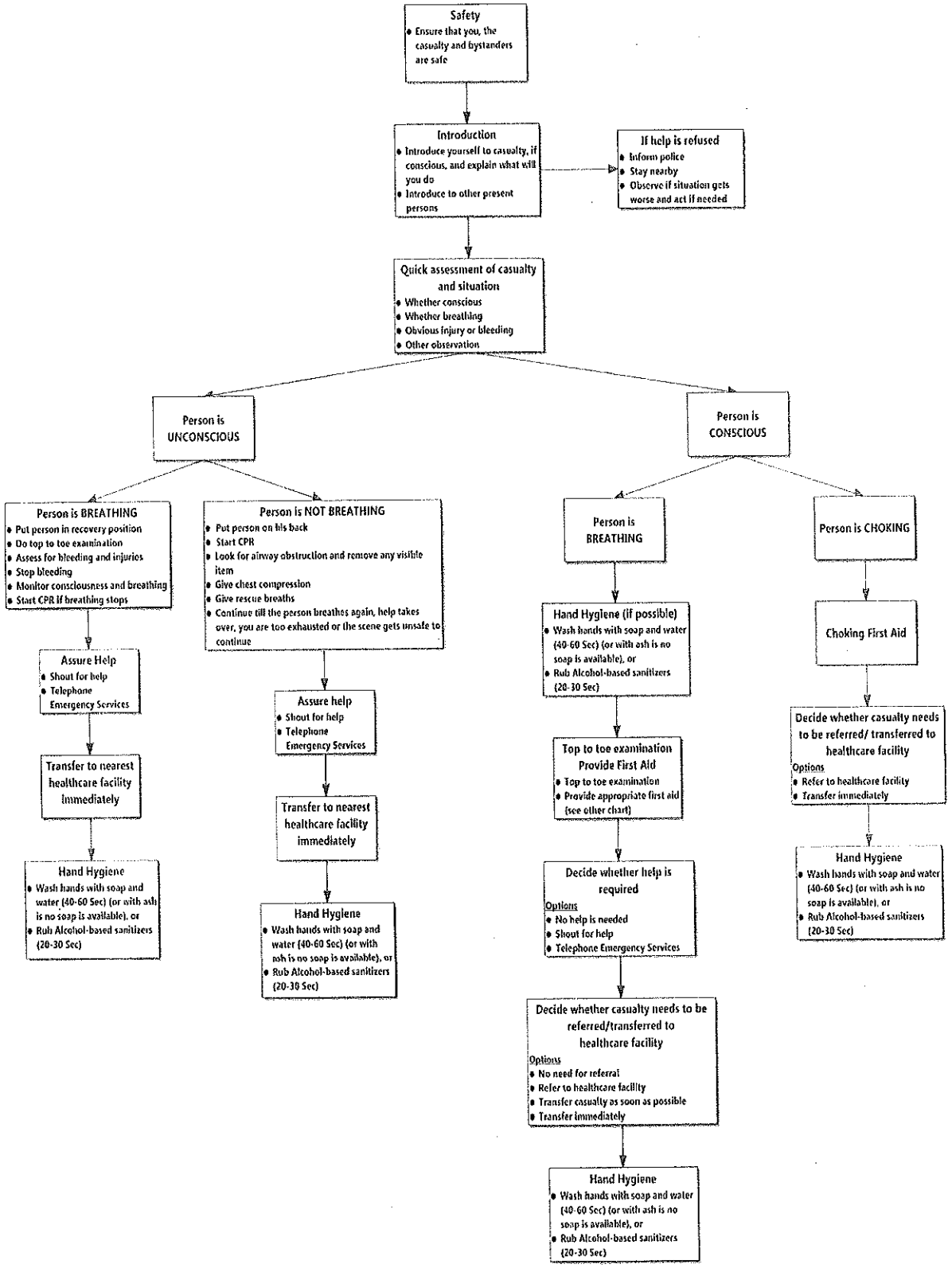
***SAFETY FIRST AND CALL FOR HELP***

1. Makesurethereisnodangertoyou of drowning.
2. 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.

**REMOVE THE VICTIM OUT OF THE WATER**

3. Remove the person rapidly and safely from the water, but do not place yourself into any danger by doing so.
4. Try to throw a rope or something that the drowning person can hold onto (if he is still conscious

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



loss of consciousness; or
bright red, cold skin (in infants).

## WHAT DO I DO?

### SAFETY FIRST

Make sure you are protected sufficiently against the cold, prior helping the other person

### PROVIDE FIRST AID

Gently move the person out of the cold.

If going indoors isn't possible, protect the person from the wind, especially around the neck and head and insulate the individual from the cold ground.

Gently remove wet clothing. Replace wet things with warm, dry coats or blankets.

If further warming is needed, do so gradually. For example, apply warm, dry compresses to the center of the body — neck, chest and groin.

Offer the person warm, sweet, non-alcoholic drinks slowly in sips. This is another important exception to general principles of first aid (not giving casualty to eat or drink).

Do not apply direct heat. Do not rewarm the person too quickly, such as with a heating lamp or hot bath.

Don't attempt to warm the arms and legs. Heating or massaging the limbs of someone in this condition can stress the heart and lungs.Do not eat, drink, or smoke.

Don't give the person alcohol or cigarettes. Alcohol hinders the rewarming process, and tobacco products interfere with circulation that is needed for rewarming.

Urgently transport the person to the nearest healthcare facility or hospital.

### H.9.2.2.1 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

### H.9.2.2.2 WHAT DO I DO WHEN THE PERSON STOPPED BREATHING?

Perform CPR.
Do not interrupt the resuscitation until:

H.9.2.3

help arrives and takes over;
the person starts to wake up, moves, opens his eyes and breathes normally; you become too exhausted to continue, or
the scene becomes unsafe for you to continue.

### HYGIENE

Wash your hands after taking care of the patient. Use soap and water to wash your hands. If no soap is available, you can use ash to wash your hands. Alcohol-based sanitizers can also be used, if available.

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.

**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 loose 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.

An important part of safety also includes washing your hands and wearing gloves or a protection when coming in contact with the injured or sick person's blood or body fluids.

In case of road accidents, as a first aider, you should:

always follow the trafficrules;

ask other people to warn traffic about the event;

if possible, place a warning sign at a good distance, at least 30 meters to either side of the accident, to warn traffic. Do not forget to remove the warning signs afterwards;

seek help from the police or emergency services;

not allow anybody to smoke near an accident site;

switch off the engine of every car involved in the accident; and

try to apply the handbrake of vehicles involved in the accident to prevent them from moving. You can also put something against the tyres to prevent rolling.

As a general rule, the injured person should not be moved from the scene of anaccident. Any movement may make the injury worse if there has been a head, neck, back, and leg or arm injury.

Only move injured people if:

the injured person is in more danger if he is left there,

the situation cannot be made safe,

medical help will not arrive soon, and

you can do so without putting yourself in danger.

STEP 2: EVALUATE THE CONDITION OF THE SICK OR INJURED PERSON

If it is safe, you can evaluate the sick or injured person's condition. Always check that he is conscious and breathing normally. Situations in which consciousness or breathing are impaired are often life threatening.

Bleeding can also happen inside the body and can be life-threatening although the loss of blood is not seen.

Techniques of resuscitation (CPR), the recovery position, etc. are explained in this manual.

**STEP 3: SEEK HELP**

Once you have evaluated the sick or injured person's condition you can decide if help is needed urgently.

> ⓘ In fact, as a general principle, the rule is not to give a casualty anything to drink or eat. Important exceptions include hypothermia (low body temperature), hypoglycaemic shock (low blood sugar in a diabetes patient), diarrhoea and fever leading to dehydration and in case of heat exhaustion or heatstroke. The details can be reviewed in the specific chapters on these conditions.

Be aware that experiencing an emergency situation is a very stressful experience for the injured or sick person.

Tosupport him through the ordeal, follow these simple tips:

tell the sick or injured person your name, explain how you are going to help him and reassure him. This will help to relax him;

listen to the person and show concern and kindness;

make him as comfortable as possible;

if he is worried, tell him that it is normal to be afraid;

if it is safe to do so, encourage family and loved ones to stay with him; and

explain to the sick or injuredpersonwhathashappenedandwhatisgoingtohappen.

WHEN CAN I STOP PROVIDING FIRST AID?

The question arises when your first aid 'duty' comes to an end?

Within first aid, CPR is a lifesaving activity. But when you can stop giving CPR? There are four reasons allowing you to stop CPR:

you see a sign of life, such as breathing;

someone trained in first aid or a medical professional takesover;

you are too exhausted to continue; or

the scene becomes unsafe for you to continue.

Q.4. **What do you mean by transport technique? Explain the shoulder pull technique, human crutch technique, blanket lift technique and kitchen – chair carry technique.**

**TRANSPORT TECHNIQUES**

After appropriate first aid has been given, the patient may need to be transported.

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 haemorrhage, and
any signs of changes or worsening of the casualty's condition.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1107** **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. **After using a thermometer is should be cleaned in which direction?**

a) Bulb to stem b) Stem to bulb

c) In any direction d) By linear movement

Q.2. **Temperature recording is lowest, when it is taken from:**

a) Rectum b) Mouth

c) Vagina d) Axilla

Q.3. **What should be used to clean a thermometer?**

a) Boiled water b) Chilled water

c) Tap water d) Oil water

Q.4. **Site of pulse use for routine assessment of vital sign in the adult:**

a) Brachial pulse b) Radial pulse

c) Carotid pulse d) Apical pulse

Q.5. **The number of pulse beats per minute is known as:**

a) Rate b) Volume

c) Tension d) Rhythm

Q.6. **The meaning of cyanosis:**

a) Blueness of skin b) Redness of skin

c) Yellowness of skin d) Normal skin

Q.7. **What is dyspnea?**

a) Jaundice b) Swelling

c) Shortness of breathing d) Bleeding

Q.8. **When plasma enters the tissue, it is called:**

a) Interstitial fluid b) Blood

c) Lymph d) Capillary

Q.9. **During taking blood pressure at upper arm chest piece of stethoscope will put on which artery:**

a) Axillary
b) Ulnar
c) Radial
d) Brachial

Q.10. **Precautions apply during measurement of blood pressure:**

a) Patient should be in supine position
b) Blood pressure instrument keep above patient level
c) Record eye level measurement
d) None of these

## Section – B

04X04 = 16 Marks

Q.1. Define vital sign. Explain the three factors of temperature.
Q.2. What do you mean by hypothermia? Write down the four clinical signs of hypothermia and route of temperature with the normal values.
Q.3. Define Apical pulse. Write down the site of pulse.
Q.4 Describe the Korotkoff sounds.

## Section – C

04X06 = 24 Marks

Q.1. Elaborate the abnormal six breathing sounds.
Q.2. Define pharmacology. How to transport and movement of water.
Q.3. Describe the respiration rate and rhythm.
Q.4. Define angina pectoris. Draw the flow chart of factors of increase cardiac output.

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**c) Record eye level measurement**

d) None of these

## Section – B

04X04 = 16 Marks

Q.1. **Define vital sign. Explain the three factors of temperature.**

**Vital Signs**

A healthy human body can self-regulate through homeostasis, which is the body's natural ability to maintain a stable internal environment by correcting abnormal conditions and balancing bodily processes. Vital signs are indicators of the body's ability to maintain homeostasis. **Temperature (T), pulse (P), respiration (R), and blood pressure (BP)** measurements are considered vital signs because they measure some of the body's vital functions and provide necessary information about the patient's physical well-being. Thus, vital signs must be obtained and calculated with the utmost care and accuracy.

| | |
|---|---|
| **time of day** | Body temperature is lower in the morning upon waking, when metabolism is still slow. The body's temperature is lowest between 2:00 a.m. and 6:00 a.m., and the body's highest temperature usually occurs in the evening between 5:00 p.m. and 8:00 p.m. Daily variation in normal temperature can range from 36.4°C to 37.3°C. |
| **age** | Infants and children normally have a higher body temperature than adults because of immature heat regulation. Children often tend to spike a fever late in the day. Older adults usually have lower than normal body temperature. |
| **gender** | Women may experience a slight increase in body temperature at the time of ovulation. |
| **physical exercise** | Body temperature will rise during exercise as a result of increased muscle contraction and increased blood flow caused by heightened cardiovascular activity. |
| **emotions** | Emotions such as crying and anger can cause an increase in body temperature. |
| **pregnancy** | An increase in metabolism during pregnancy may cause the body temperature to rise. |
| **environmental Changes** | Hot weather can cause serious consequences for older adults whose bodies are less able to regulate body temperature because of decreased metabolic functioning. Exposure to excessively cold temperatures will lower body temperature. Cool environments that may feel fine to a younger adult can cause hypothermia in an older person. |
| **infection** | An elevated temperature may be one of the first signs of an infection. A fever is the body's way of fighting or killing off infectious organisms. |
| **drugs** | Drugs may increase muscular activity or metabolism, which in turn increases temperature. Antipyretic (fever-reducing) drugs such as aspirin lower the above-normal temperature. |
| **Food** | The process of eating and digestion may cause a rise in the body temperature. Fasting decreases metabolism, which will lower body temperature. |

Q.2. What do you mean by hypothermia? Write down the four clinical signs of hypothermia and route of temperature with the normal values.

**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.

**Normal Values**

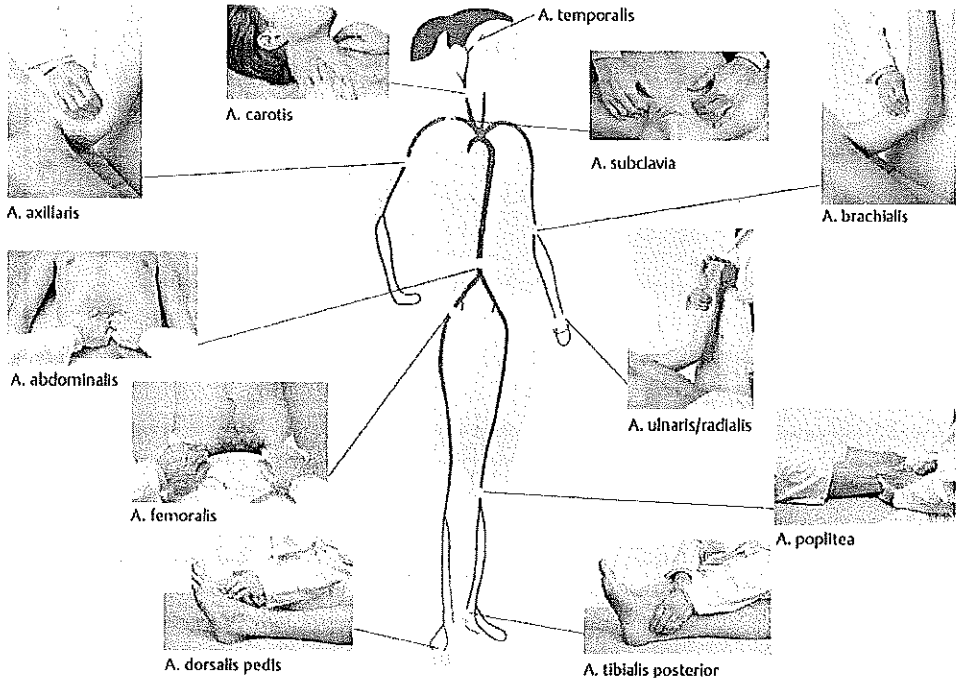
The normal temperature, based on statistical averages, is as follows for each measurement site:

| | |
|---|---|
| Oral | 98.6°F / 37°C |
| Rectal | 99.6°F / 37.6°C |
| Axillary (under arm) | 97.6°F / 36.4°C |
| Aural (ear) | 98.6°F / (37°C |
| Temporal artery | 98.6°F / 37°C |

Q.3. Define Apical pulse. Write down the site of pulse.

**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.4. **Describe 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 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. |

## Section – C

04X06 = 24 Marks

**Q.1. Elaborate the abnormal six breathing sounds.**

**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. |

**Q.2. Define pharmacology. How to transport and movement of water.**

**Pharmacology**

Pharmacology can be defined as the study of the effects of drugs on the function of living systems. Its purpose is to understand what drugs do to living organisms and, more practically, how their effects can be applied to the treatment of diseases.

**Transport and movement of Water and Solutes**

Water can readily and passively pass across the membrane and does so by osmosis in response to changing solute concentrations. The amount of solute in solution determines the osmolarity – the higher the solute concentration, the higher the osmolarity; this is also referred to as the osmotic pressure (or pull). Electrolytes move across the membrane via the protein channels, some by diffusion and also via a passive mode of transport where solutes move towards an area of low solute concentration. Sodium and potassium are an exception to this rule, as they are required to move against the concentration gradient to preserve higher intravascular sodium concentrations. Energy is utilized to pump sodium out of the cell via the protein channels and pump potassium back into the cell, known as the sodium/potassium pump.

The movement of water and solutes out of the intravascular space and into the interstitial space is dependent on opposing osmotic and hydrostatic pressures. Hydrostatic pressure is caused by the pumping action of the heart and the diameter (resistance) of the vessels/capillaries forcing water and molecules that are small enough to pass through the membrane out of the vessel and into the interstitial fluid. Within the vascular system, only the capillaries have semi-permeable membranes and this is where 'filtration' occurs. At the arteriole end of the capillary, the hydrostatic pressure exceeds

the osmotic pressure, moving solutes out of the plasma and into the interstitial space. At the venous end, hydrostatic pressure is reduced and the osmotic pressure within the vessel (plasma) is higher so water is pulled back into the vessel and circulating volume. The osmotic pressure is provided by plasma proteins that are too large to pass through the membrane even under pressure. Oedema can result if the membranes become permeable to protein; osmotic pressure is then reduced, resulting in excess of water moving into the interstitial space. Pulmonary oedema is caused by this mechanism at the site of the lungs. Sep- sis or a systemic inflammatory response is an example of a condition where the capillary membranes become more permeable to protein.

Q.3. **Describe the respiration 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.

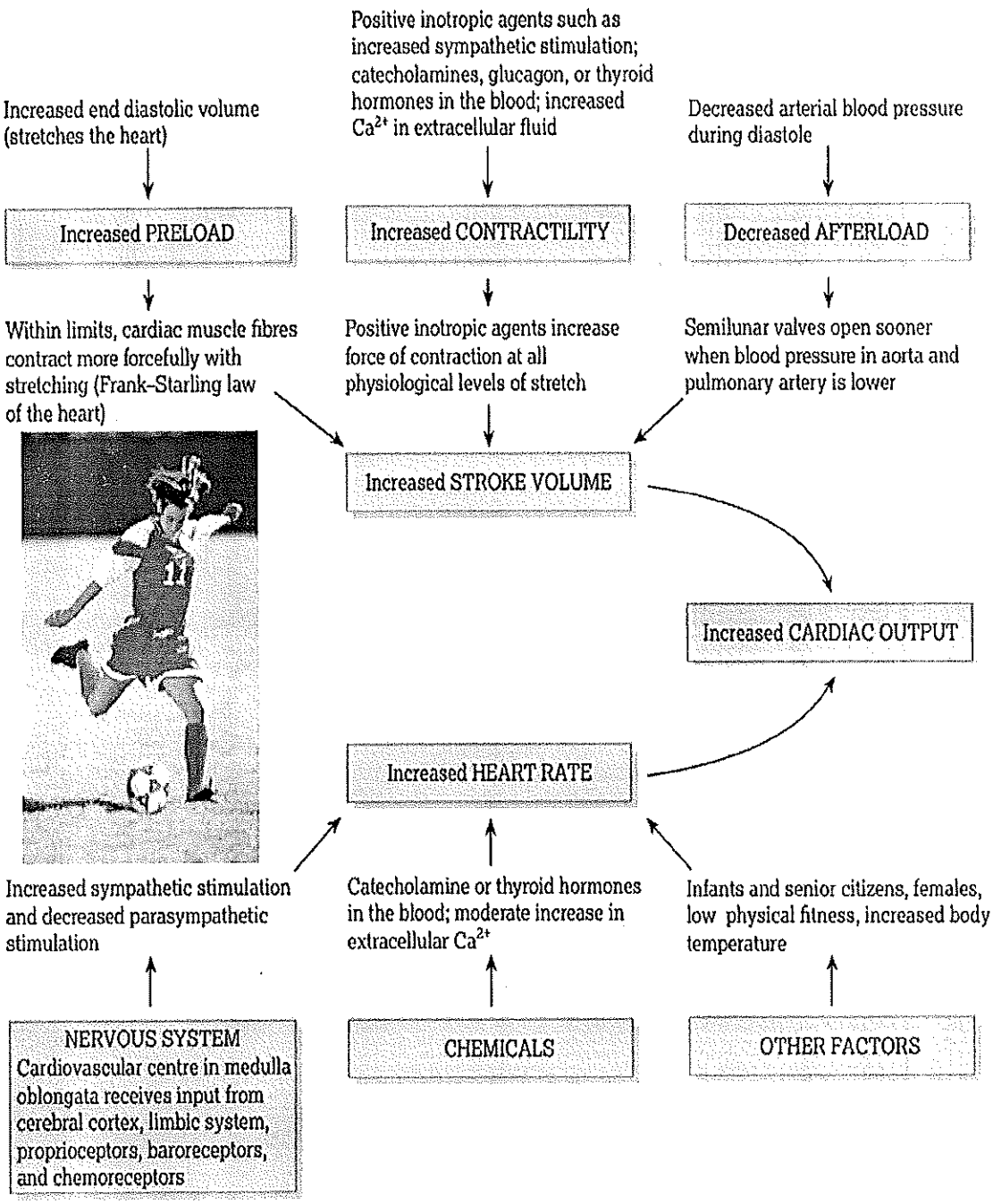
**Respiratory Rhythm**

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.

Q.4. **Define angina pectoris. Draw the flow chart of factors of increase cardiac output.**

Angina pectoris, or just angina, is temporary chest pain or discomfort caused by decreased blood flow to the heart muscle. Because of the decreased flow of blood, there is not enough oxygen to the heart muscle resulting in chest pain. Coronary artery disease, which can result in narrowing of the coronary arteries that carry blood and oxygen to the heart muscle, is one of the most common causes of angina. While angina is not a heart attack, it does signal an increased risk for a heart attack. There are two

main types of angina – stable and unstable. Stable angina, the most common type, develops during physical activity and usually lasts a short time (approximately five minutes or less) if the physical activity has ended. Unstable angina is less common and usually occurs during periods of rest. Unstable angina usually lasts longer and symptoms may be more severe



# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1107** **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. **The most important electrolyte of intracellular fluid is:**

a) Sodium b) Calcium

c) Potassium d) Chloride

Q.2. **Stroke volume is:**

a) 50 ml b) 70 ml

c) 90 ml d) 120 ml

Q.3. **Which of the following factors is least likely to affect the pulse rate?**

a) Body temperature b) Physical exercise

c) Environment d) Gender

Q.4. **Temperature regulation is under control of:**

a) Hypothalamus b) Lungs

c) Thyroid gland d) Pituitary gland

Q.5. **The number of pulse beats per minute is known as:**

a) Rate b) Volume

c) Tension d) Rhythm

Q.6. **Enteral route of administration is all except:**

a) Sublingual b) Intradermal

c) Rectal d) Oral

Q.7. **What is dyspnea?**

a) Jaundice b) Swelling

c) Shortness of breathing d) Bleeding

Q.8. **Intramuscular injection is given at an angle of:**

a) 90 degree b) 45 degree

c) 30 degree d) 15 degree

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Q.9. **The instrument used to measure blood pressure is:**

a) Electrocardiography
b) Stethoscope
c) Rotameter
d) Sphygmomanometer

Q.10. **Temperature difference between axillary and rectal route is:**

a) $1^0F$
b) $2^0F$
c) $3^0F$
d) $4^0F$

## Section – B

04X04 = 16 Marks

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

Q.2. What do you mean by hypothermia? Write down the four clinical signs of hypothermia and route of temperature with the normal values.

Q.3. What is 36.8 Celsius to Fahrenheit?

Q.4 Draw the flow chart of factors of increase cardiac output.

## Section – C

04X06 = 24 Marks

Q.1. Elaborate the abnormal four breathing sounds and eight rights of drug administration.

Q.2. Define pharmacology. How to transport and movement of water.

Q.3. What do you mean by heart failure? Write down the difference between pharmacokinetics and pharmacodynamics.

Q.4. Define blood pressure. Elaborate the **"Korotkoff Sound".**

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c) $3^0F$

d) $4^0F$

## Section – B

04X04 = 16 Marks

Q.1. **Define fever. Explain the types of fever.**

**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.

| | |
|---|---|
| Intermittent fever | Body temperature that alternates between febrile and afebrile states |
| Remittent fever | Elevated body temperature that remains high throughout the day, fluctuating more than 2 degrees Fahrenheit |
| Relapsing fever | Febrile periods that last for a couple of days, go away, and then return |
| Constant (continuous) fever | Elevated body temperatures throughout the day with minimal temperature fluctuation (usually not more than 1 degree Fahrenheit) over a 24-hour period |

Q.2. **What do you mean by hypothermia? Write down the four clinical signs of hypothermia and route of temperature with the normal values.**

**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.

**Normal Values**

The normal temperature, based on statistical averages, is as follows for each measurement site:

| | |
|---|---|
| Oral | 98.6°F / 37°C |
| Rectal | 99.6°F / 37.6°C |
| Axillary (under arm) | 97.6°F / 36.4°C |
| Aural (ear) | 98.6°F / (37°C |
| Temporal artery | 98.6°F / 37°C |

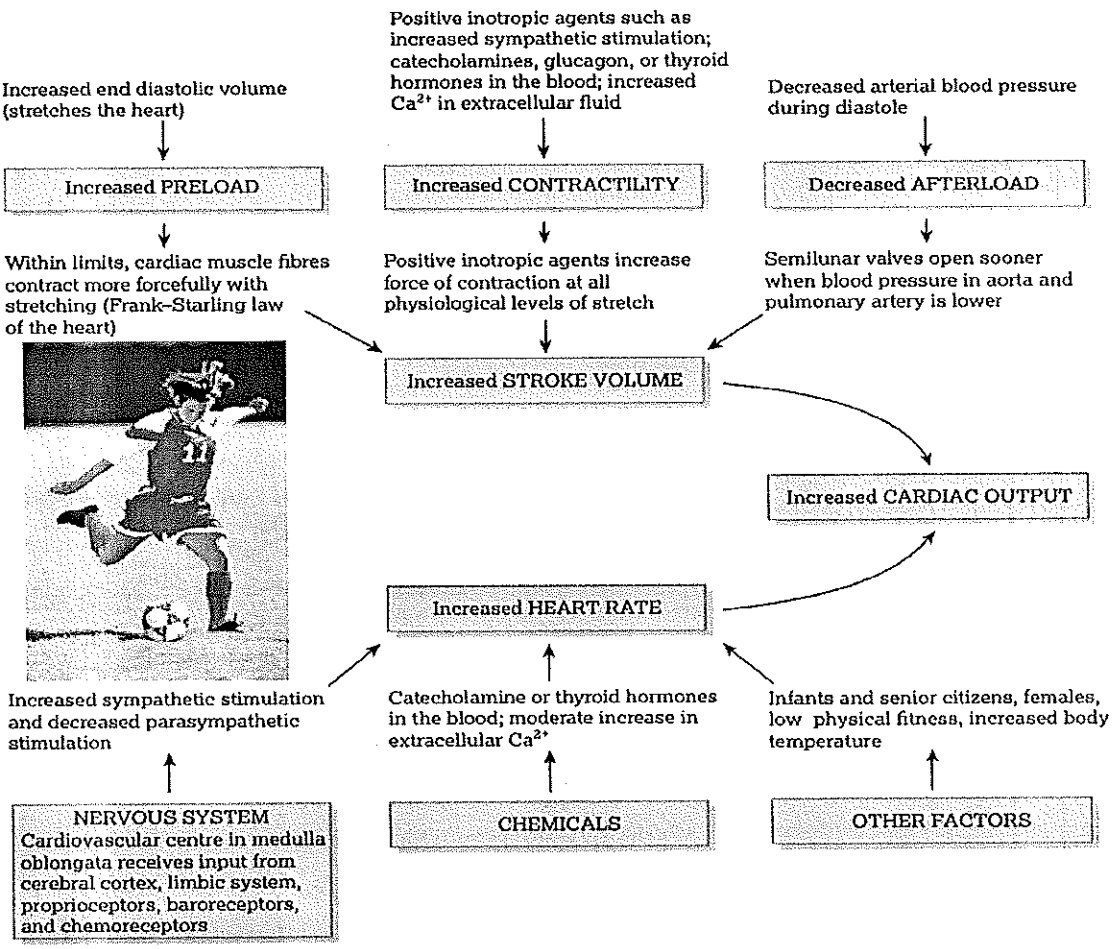
**Q.3. What is 36.8 Celsius to Fahrenheit?**

36.8° Celsius is equivalent to 98.24° Fahrenheit. It can be found out by substituting the value of C in the C to F formula which is °F = (9/5) °C+32. By putting C = 36.8, we get °F = (9/5) × 36.8 + 32.

⇒ °F = 66.24 + 32

⇒ °F = 98.24°

**Q.4 Draw the flow chart of factors of increase cardiac output.**



# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

Q.1. **Elaborate the abnormal four breathing sounds and eight rights of drug administration.**

**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. |
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| **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. |

| | |
|---|---|
| **1. Right patient** | • Ask the patient their first and last name<br>• Does the order match the patient? |
| **2. Right medication** | • Does the medication label match the order?<br>• Be vigilant with look-alike and sound-alike medications |
| **3. Right dose** | • Does the strength and dosage match the order?<br>• Is it half, whole or multiple tablets? |
| **4. Right time** | • Does the administration time match the order? |
| **5. Right route** | • Does the route match the order?<br>• Can this be crushed or mixed in other substances?<br>• Have any transdermal patches been removed? |
| **6. Right documentation** | • Document immediately after the medication is administered |
| **7.** | • |
| **8.** | • |

Q.2. **Define pharmacology. How to transport and movement of water.**

**Pharmacology**

Pharmacology can be defined as the study of the effects of drugs on the function of living systems. Its purpose is to understand what drugs do to living organisms and, more practically, how their effects can be applied to the treatment of diseases.

**Transport and movement of Water and Solutes**

Water can readily and passively pass across the membrane and does so by osmosis in response to changing solute concentrations. The amount of solute in solution determines the osmolarity – the higher the solute concentration, the higher the osmolarity; this is also referred to as the osmotic pressure (or pull). Electrolytes move across the membrane via the protein channels, some by diffusion and also via a passive mode of transport where solutes move towards an area of low solute concentration. Sodium and potassium are an exception to this rule, as they are required to move against the concentration gradient to preserve higher intravascular sodium concentrations. Energy is utilized to pump sodium out of the cell via the protein channels and pump potassium back into the cell, known as the sodium/potassium pump.

The movement of water and solutes out of the intravascular space and into the interstitial space is dependent on opposing osmotic and hydrostatic pressures. Hydrostatic pressure is caused by the pumping action of the heart and the diameter (resistance) of the vessels/capillaries forcing water and molecules that are small enough to pass through the membrane out of the vessel and into the interstitial fluid. Within the vascular system, only the capillaries have semi-permeable membranes and this is where 'filtration' occurs. At the arteriole end of the capillary, the hydrostatic pressure exceeds the osmotic pressure, moving solutes out of the plasma and into the interstitial space. At the venous end, hydrostatic pressure is reduced and the osmotic pressure within the vessel (plasma) is higher so water is pulled back into the vessel and circulating volume. The osmotic pressure is provided by plasma proteins that are too large to pass through the membrane even under pressure. Oedema can result if the membranes become permeable to protein; osmotic pressure is then reduced, resulting in excess of water moving into the interstitial space. Pulmonary oedema is caused by this mechanism at the site of the lungs. Sep- sis or a systemic inflammatory response is an example of a condition where the capillary membranes become more permeable to protein.

Q.3. **What do you mean by heart failure? Write down the difference between pharmacokinetics and pharmacodynamics.**

**Heart Failure (HF)**

Heart failure is a life-threatening disease and addressing it should be considered a global health priority. At present, approximately 26 million people worldwide are living with heart failure. The outlook for such patients is poor, with survival rates worse than those for bowel, breast or prostate cancer. Furthermore, heart failure places great stresses on patients, caregivers and healthcare systems. Demands on healthcare services, in particular, are predicted to increase dramatically over the next decade as patient numbers rise owing to ageing populations, detrimental lifestyle changes and improved survival of those who go on to develop heart failure as the final stage of another disease.

HF is a clinical syndrome characterized by typical symptoms (e.g. breathlessness, ankle swelling and fatigue) that may be accompanied by signs (e.g. elevated jugular venous pressure, pulmonary crackles and peripheral oedema) caused by a structural and/or functional cardiac abnormality, resulting in a

reduced cardiac output and/ or elevated intracardiac pressures at rest or during stress. The current definition of HF restricts itself to stages at which clinical symptoms are apparent. Before clinical symptoms become apparent, patients can present with asymptomatic structural or functional cardiac abnormalities [systolic or diastolic left ventricular (LV) dysfunction], which are precursors of HF. Recognition of these precursors is import- ant because they are related to poor outcomes, and starting treatment at the precursor stage may reduce mortality in patients with asymptomatic systolic LV dysfunction.

Pharmacokinetics looks at the absorption, distribution, metabolism and excretion of drugs within the body, i.e. what the body does to the drug. When these four factors are considered, with the dose of a drug given, the concentration of drug in the body over a period of time can be determined. Pharmacokinetics is most useful when considered with 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.

Q.4. **Define blood pressure. Elaborate the "Korotkoff Sound".**

**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 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. |

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1108** **Time: 2 Hours**

**Course Name: Support and 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. **During swallowing food is stopped from entering the larynx by the:**

a) Esophagus b) Pharynx

c) Eustachian tube d) Epiglottis

Q.2. **All of the following disorders are chronic pulmonary disorders (COPD) except:**

a) Pleural effusion b) Bronchial asthma

c) Emphysema d) Chronic bronchitis

Q.3. **Which condition is responsible for inspiration?**

a) Contraction of intercostal muscles b) Dilatation of intercostal muscle

c) Contraction of diaphragm d) Both a and c

Q.4. **The commonest cause of asthma is:**

a) Pneumothorax b) Microbial infection

c) Allergy d) Pulmonary hypertension

Q.5. **All are the following are sign and symptom of pneumonia except:**

a) Fever b) Bradycardia

c) Cough and difficulty breathing d) Chest indrawing

Q.6. **Normal respiration rate of a old age ranges between:**

a) 18-20 breath/minute b) 12-16 breath/minute

c) 12-20 breath/minute d) 20-24 breath/minute

Q.7. **Which of the following symptoms is common is asthma?**

a) Barking cough b) Snoring

c) Wheezing d) Moisture

Q.8. **The goal of pursed lip breathing exercise is to:**

a) Prevent aspiration pneumonia

b) Reduce the amount of trapper air

c) Strengthen the diaphragm

d) Loose the bronchial secretions

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. Define breathing. Write down the difference between the breast breathing and abdominal breathing.

Q.2. Write down the pathological and physiological causes of snore and stridor sounds in human.

Q.3. What do you mean by "lip brake"?

Q.4. Describe the therapy of pneumonia.

## Section – C

04X06 = 24 Marks

Q.1. Define pneumonia. Explain the pneumonia prophylaxis.

Q.2. Define COPD. Write down the safety instruction for handling oxygen.

Q.3. What do you mean by fear? Describe the categories of fear and how to support patient with fear.

Q.4. Describe **"VATI"** position.

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a) Fever **b) Bradycardia**

c) Cough and difficulty breathing d) Chest indrawing

Q.6. **Normal respiration rate of a old age ranges between:**

a) 18-20 breath/minute b) 12-16 breath/minute

**c) 12-20 breath/minute** d) 20-24 breath/minute

Q.7. **Which of the following symptoms is common is asthma?**

a) Barking cough b) Snoring

**c) Wheezing** d) Moisture

Q.8. **The goal of pursed lip breathing exercise is to:**

a) Prevent aspiration pneumonia

**b) Reduce the amount of trapper air**

c) Strengthen the diaphragm

d) Loose the bronchial secretions

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. **Define breathing. Write down the difference between the breast breathing and abdominal 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 sup- plement breathing. Therefore, a small disorder in the cardiopulmonary system can strongly influence human breathing is one of the vital functions.

| 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. Write down the pathological and physiological causes of snore and stridor sounds in human.

| Deviation | Physiological Causes | Pathological Causes |
|---|---|---|
| Snore | Fluttering movements of the relaxed palate of the tongue or the receding of the tongue. Snoring is usually, harmless. | Bulge( mucous) in the nose |
| Stridor | None | Narrowing of the respiratory tract, eg in bronchial asthma, swallowed foreign body, chronic obstructive bronchitis |

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 dyspnoea, 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. **Describe the therapy of pneumonia.**

**Therapy**

Depending on the pathogen, appropriate drugs are used. For example, bacterial pneumonia is treated with antibiotics (eg Augmentin®). In the case of dry irritation cough suppressants are administered. In the case of productive cough expectorants. In severe pain, analgesics can be used in case of high fever, antipyretics. A conscientious respiratory therapy contributes decisively to the success of the therapy.

| Drugs | | | |
|---|---|---|---|
| | Effect | Side Effects | Examples |
| Expectorants | Expectorants help to make secretions easier to lift off to help ease the risk of infection. | Bronchospasm<br>nausea<br>skin irritations | Mucosolvan®, |
| Antitussive | Antitussives block the cough reflex and so relieve the cough. | Constipation<br>Respiratory Depression<br>Sedation | Codipront® |

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

Q.1. **Define pneumonia. Explain the pneumonia prophylaxis.**

**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.

**The taking of prophylactic measures involves the following steps:**

1. **Realizing Risks**
2. **Assess the hazard**
3. **Plan measures**
4. **Perform measures**
5. **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 qual- ified 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 sup- port, respiratory training / respiratory gymnastics.
- Patients with increased secretion collection: retraction, wrapping, inhalation, high fluid intake (muco- lytic 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 doc- umentation 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.2. **Define COPD. Write down the safety instruction for handling oxygen.**

**Safety Instructions for Handling Oxygen**

Oxygen is a highly explosive gas and must be handled appropriately:

- bottles are not allowed to fall, so fix the bottles or lay them down. (oxygen – trolley)
- Always transport the oxygen bottles only with the valve closed, do not change the bottles in the pa- tient's room.
- Oxygen supports combustion, therefore make sure there is no fire source nearby; There is an absolute ban on smoking.
- Do not apply force when opening the bottle.
- Check the bottles before each use.
- Notify the technical service department in case of damage, do not self-repair!
- Principles of Oxygen Therapy
- Oxygen is a medicine and may only be given on medical prescription. There are many situations where no oxygen may be given, eg, special care is required with patients with COPD.
- Oxygen is dry in each reservoir and must be moistened with aqua distillate (distal water) to avoid mucus damage.
- During administration, aseptic work must be taken to prevent contamination. For this reason, new tubing systems are used for each patient.

Q.3. **What do you mean by fear? Describe the categories of fear and how to support patient with fear.**

**Fear**

In many diseases of the respiratory system, dyspnoea appears as a companion symptom. Dyspnoea is always a cause of anxiety. The patient has the feeling of suffocating. Typically, the patient with a shortness of breath has a superficial, accelerated breathing and is short-winded. A whistling, gushing or buzzing breathing sound can be heard. Usually the patient is cyanotic and tachycardia. In the case of a light dyspnoea, it is usually sufficient to interrupt the current activity or to slow down the tempo. In this case, adequate body postures and the lip brake are recommended. Depending on the situation, oxygen is administered in low concentrations. Particularly important is the documentation of the shortness of breath, when it occurred, and what measures have helped to mitigate it. A consistent documentation helps to prevent dyspnoea. If the dyspnoea is so severe that the patient might stop breathing, emergency measures must be taken:

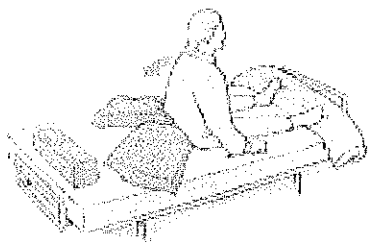
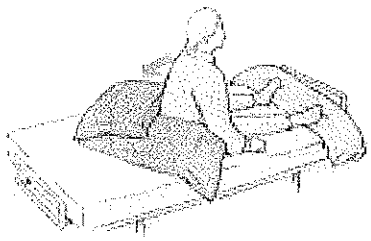
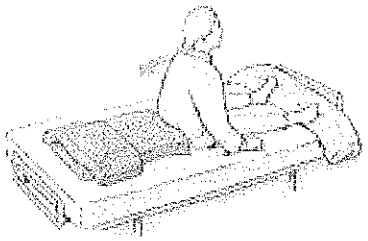
**Anxiety is divided into four categories**

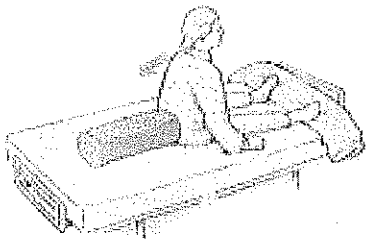
1. *mild anxiety,*
2. *moderate anxiety,*
3. *severe anxiety and*
4. *panic.*

**Support of Patients with Fear**

Always take fear seriously! Avoid expressions like "you don't need to be afraid". It is important to recognize the causes of anxiety in order to initiate appropriate measures. If a patient suffers from respiratory distress, for example, the measures described above must be initiated immediately. Encourage patients to talk about their fears and listen attentively. Forward the information thus obtained to a doctor and document it. Depending on the situation, relaxation measures such as a quiet environment, a warm bath, wraps, a massage etc. can be helpful. However, always discuss these measures with a doctor. People with anxiety disorders can be treated psychotherapeutically.

Q.4. **Describe "VATI" position.**

| Position | Procedure | How often? How long? | Goal |
|---|---|---|---|
| V-Position  | Place two non-bulging pillows to a V that the tips overlap. Support the patient's head as he lags. The tops of the pillows are below their sacral area. | Several times daily, 10-20min. | Stretching the lower lungs Promoting thoratic respiration |
| A-Position  | Place two pillows like an A without a horizontal strip. When the patient is lying down, her third cervical vertebra lies on the pillow, the neck is free. | Several times daily, 10-20minutes | Stretching the upper lung |
| T-Position  | Place two pillows as a T. When the patient lays down, he lies with the spine on the longitudinal cushion. Adjust the cross pillow to the target. | Several times daily, 10-20minutes | Stretching the lower, middle or upper lung parts |

| | | | |
|---|---|---|---|
| I-Position  | Place a roll in the longitudinal direction under the spine of the patient. | Depends on the patient, only a short time | Stretching the lower, middle or upper lung parts |

q


# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1108** **Time: 2 Hours**

**Course Name: Support and 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. **Atmospheric pressure is important in the process of:**

a) Blood flow b) Micturition

c) Reproduction d) Breathing

Q.2. **The lung function tests are determined by:**

a) Spirometer b) Tonometer

c) Sphygmomanometer d) Barometer

Q.3. **The nurse is completing the admission assessment on a 13-year-old client diagnosed with asthma. Which sign and symptoms would the nurse expect to find?**

a) Fever and crepitus b) Dyspnoea and wheezing

c) Rales and hives d) Normal chest shape and eupnea

Q.4. **The commonest cause of asthma is:**

a) Pneumothorax b) Microbial infection

c) Allergy d) Pulmonary hypertension

Q.5. **All are the following are sign and symptom of pneumonia except:**

a) Fever b) Bradycardia

c) Cough and difficulty breathing d) Chest indrawing

Q.6. **Normal respiration rate of a old age ranges between:**

a) 18-20 breath/minute b) 12-16 breath/minute

c) 16-20 breath/minute d) 20-24 breath/minute

Q.7. **Blood is sputum of patient called:**

a) Hemoptysis b) Epistaxis

c) Hematemesis d) Hematuria

Q.8. **Which color sputum produce in bronchitis patient?**

a) Whitish b) Greenish

c) Yellowish d) Reddish

Q.9. **A pulmonary embolism is a blood clot that becomes lodged in the lungs.**

a) True b) False

Q.10. **Which respiratory sound indicate are patient suffer from last stage?**

a) Stridor b) Rattle noise

c) Snoring d) Moisture

## Section – B

04X04 = 16 Marks

Q.1. Define breathing. Write down the pathological and physiological causes of flat breathing and deep breathing.

Q.2. Define lung embolism. Write down the four symptom and therapy of lung embolism.

Q.3. What do you mean by "lip brake"?

Q.4. How to support of patient with fear?

## Section – C

04X06 = 24 Marks

Q.1. What do you mean by sputum? Describe the deviation of sputum.

Q.2. Define pneumonia. Describe the influencing factors f breathing.

Q.3. What is bronchial asthma. Write down the four causes, symptom and draw the flow chart of pathophysiology of bronchial asthma.

Q.4. Describe **"VATI"** position

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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## Section – B

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Q.1. **Define breathing. Write down the pathological and physiological causes of flat breathing and deep 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 sup- plement breathing. Therefore, a small disorder in the cardiopulmonary system can strongly influence human breathing is one of the vital functions.

| Deviation | Physiological Causes | Pathological Causes |
|---|---|---|
| Flat Breathing | In Stress | Pain in the thorax area, for exam- ple broken rips or pneumonia |
| Deep Breathing | There is not enough oxygen (high altitude above 2500 meters) | Metabolic disorders |

Q.2. **Define lung embolism. Write down the four symptom 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.

**Symptoms**

- Small embolisms are mostly symptomless
- 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.

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 dyspnoea, 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. **How to support of patient with fear?**

**Support of Patients with Fear**

Always take fear seriously! Avoid expressions like "you don't need to be afraid". It is important to recognize the causes of anxiety in order to initiate appropriate measures. If a patient suffers from respiratory distress, for example, the measures described above must be initiated immediately. Encourage patients to talk about their fears and listen attentively. Forward the information thus obtained to a doctor and document it. Depending on the situation, relaxation measures such as a quiet environment, a warm bath, wraps, a massage etc. can be helpful. However, always discuss these measures with a doctor. People with anxiety disorders can be treated psychotherapeutically.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

Q.1. **What do you mean by sputum? Describe the deviation 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 car- cinoma |
| Odor | Normally sputum has no smell, due to bacte- rial decomposition and / or tissue decay, it can smell smelly and foul. | For example, tissue decay in bronchial carcinoma |

Q.2. **Define pneumonia. Describe the influencing factors breathing.**

**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.

Influencing Factors

The following are some examples of factors that may affect breathing:

- Biological factors
    - A state of the cardiovascular system, condition of the respiratory system, physical activity, sleep, pain, medication
- Psychological factors
    - An inner peace and serenity, joy, fear, anger, hustle and bustle, defeat Environmental Factors an air pressure, geographical location, composition of

the air, temperature, moisture content of the air

- Environment factors
  - Air pressure, Ozon content of the air, geographical location, composition of air, Smog, Tem- perature, Humidity
- Socio-cultural factors
  - (Eg, physical activity, breathing), workplace (cellar, mine, well ventilated rooms), habits (time to do sports, singing hours)

Q.3. **What is bronchial asthma. Write down the four causes, symptom and draw the flow chart of pathophysiology of bronchial asthma.**

**Bronchial Asthma**

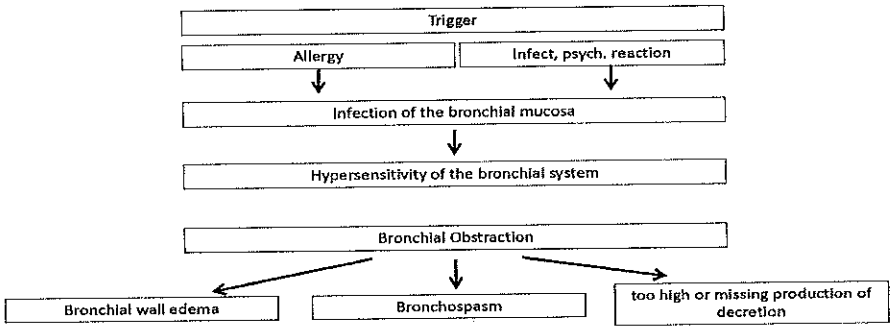
A chronic lung disorder that is marked by recurring episodes of airway obstruction (bronchospasm) manifested by laboured breathing accompanied especially by wheezing and coughing and by a sense of constriction in the chest, and that is triggered by hyper reactivity to various stimuli.

**Causes**

Depending on the trigger, a distinction is made between an allergic asthma (exogenous) and a non-allergic asthma (endogenous).

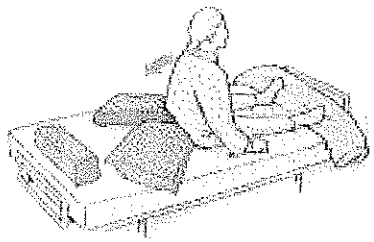
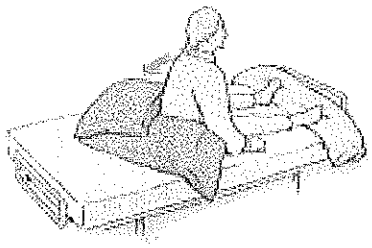
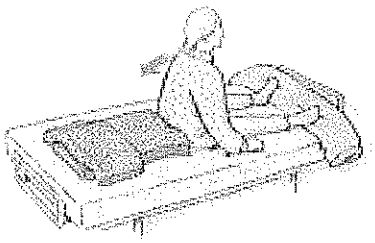
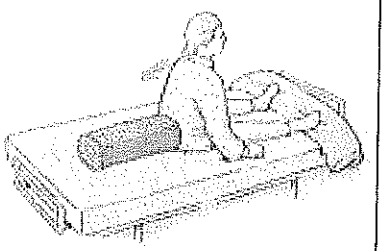
Allergic asthma:

| | |
|---|---|
| • Pollen<br>• House dust (mites)<br>• Feathers<br>• Animal hair<br>• Medicines<br>• Non-allergic asthma: This form of asthma is more common.<br>• Asthma attacks can be triggered by respiratory infections<br>• physical exertion<br>• Rapid pulse<br>• Fatigue | • Cold air<br>• Stress<br>• Inhalation of respiratory tract substances (eg tobacco smoke, exhaust fumes).<br>• Symptoms<br>• Cough<br>• Wheezing<br>• Difficulty sleeping<br>• Hiccups<br>• Shortness of breathing<br>• Nasal congestion |



# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Q.4. **Describe "VATI" position.**

| Position | Procedure | How often? How long? | Goal |
|---|---|---|---|
| V-Position  | Place two non-bulging pillows to a V that the tips overlap. Support the patient's head as he lags. The tops of the pillows are below their sacral area. | Several times daily, 10-20min. | Stretching the lower lungs Promoting thoratic respiration |
| A-Position  | Place two pillows like an A without a horizontal strip. When the patient is lying down, her third cervical vertebra lies on the pillow, the neck is free. | Several times daily, 10-20minutes | Stretching the upper lung |
| T-Position  | Place two pillows as a T. When the patient lays down, he lies with the spine on the longitudinal cushion. Adjust the cross pillow to the target. | Several times daily, 10-20minutes | Stretching the lower, middle or upper lung parts |
| I-Position  | Place a roll in the longitudinal direction under the spine of the patient. | Depends on the patient, only a short time | Stretching the lower, middle or upper lung parts |

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**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. **Catheter cleaning should be done from:**

a) Less clean to more clean
b) More clean to less clean
c) Using circular strokes
d) Any of the above

Q.2. **Which type of catheter is generally used for the client with urine retention?**

a) Indwelling catheter
b) Coude catheter
c) Straight catheter
d) Three way

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. **Which position is used while administering urinary catheterization in a patient?**

a) Right lateral positioning
b) Left lateral positioning
c) Dorsal recumbent position
d) Supine positioning

Q.5. **K-90 catheter is:**

a) Permanent catheter
b) Only till 2 days' insertion
c) Temporarily catheter
d) Indwelling catheter

Q.6. **Indwelling catheterization is known as:**

a) Single lumen catheter
b) Double lumen catheter
c) Three lumen catheter
d) K-90 catheter

Q.7. **What is the position of the patient while giving the enema?**

a) Supine position
b) Prone position
c) Side lying position
d) Left lateral position

Q.8. **All the following are the reason for administrating an enema, except:**

a) Relieve constipation
b) Weight loss
c) Prevent escape of fecal material during surgical procedure
d) Establish a bowel training programme

Q.9. **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

Q.10. **In an adult, enema tube should be inserted inside the rectum up to:**

a) 1-2 inches

b) 3-4 inches

c) 5-6 inches

d) 7-8 inches

## Section – B

04X04 = 16 Marks

Q.1. Write down the purpose of deal with sterile material.

Q.2. What is included in HCAI?

Q.3. What do you mean by asepsis?

Q.4 Write down the types of enema.

## Section – C

04X06 = 24 Marks

Q.1. Describe the sutures.

Q.2. Describe the general instruction of deal with sterile material.

Q.3. Define urinary catheterization. Write the four uses and risk and potential problem of urinary catheterization.

Q.4. Define enema. Write down the four indication and contraindication of enema administration.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**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. **Catheter cleaning should be done from:**

a) Less clean to more clean **b) More clean to less clean**

c) Using circular strokes d) Any of the above

Q.2. **Which type of catheter is generally used for the client with urine retention?**

**a) Indwelling catheter** b) Coude catheter

c) Straight catheter d) Three way

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. **Which position is used while administering urinary catheterization in a patient?**

a) Right lateral positioning b) Left lateral positioning

**c) Dorsal recumbent position** d) Supine positioning

Q.5. **K-90 catheter is:**

a) Permanent catheter b) Only till 2 days' insertion

**c) Temporarily catheter** d) Indwelling catheter

Q.6. **Indwelling catheterization is known as:**

a) Single lumen catheter **b) Double lumen catheter**

c) Three lumen catheter d) K-90 catheter

Q.7. **What is the position of the patient while giving the enema?**

a) Supine position b) Prone position

c) Side lying position **d) Left lateral position**

Q.8. **All the following are the reason for administrating an enema, except:**

a) Relieve constipation

**b) Weight loss**

c) Prevent escape of fecal material during surgical procedure

d) Establish a bowel training programme

Q.9. **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

Q.10. **In an adult, enema tube should be inserted inside the rectum up to:**

a) 1-2 inches **b) 3-4 inches**

c) 5-6 inches d) 7-8 inches

## Section – B

04X04 = 16 Marks

Q.1. **Write down 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. **What is included in HCAI?**

**Common HCAIs include:**

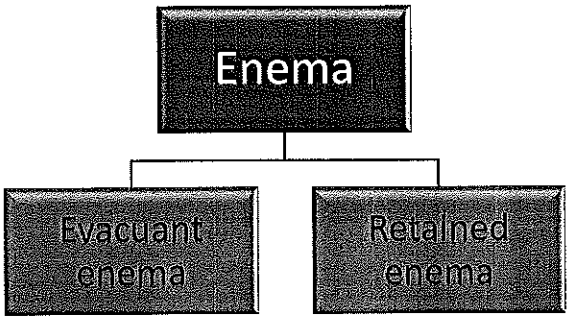
- catheter-associated urinary tract infection
- central line-associated bloodstream infection
- *Clostridium difficile* infection
- surgical site infection
- ventilator-associated pneumonia

Q.3. **What do you mean by 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.

Q.4. **Write down the types of enema.**

**Types of enema: -**




1. **Evacuant enema: -**

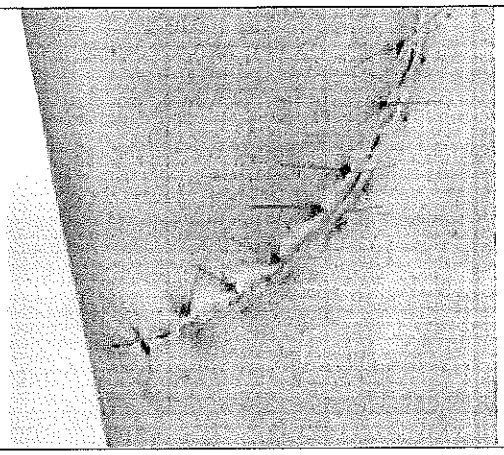
A. Simple enema
B. Medicated evacuant enema: - it is five type of medicated enema
   i. Oil enema
   ii. Purgative enema
   iii. Astringent enema
   iv. Anthelmintic enema
   v. Carminative enema
C. Cold enema

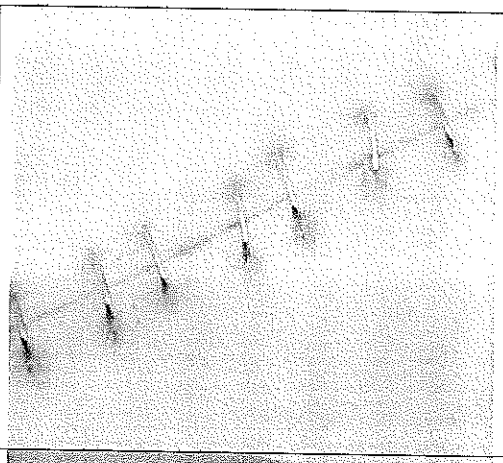
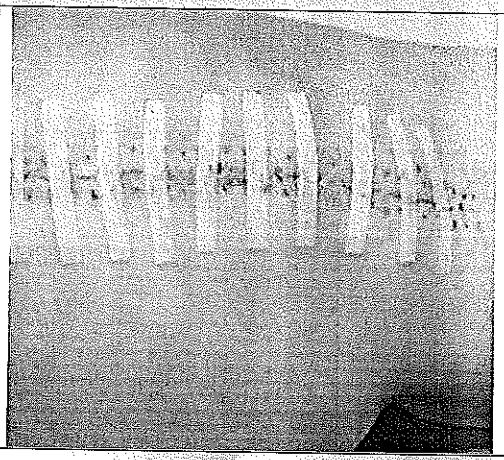
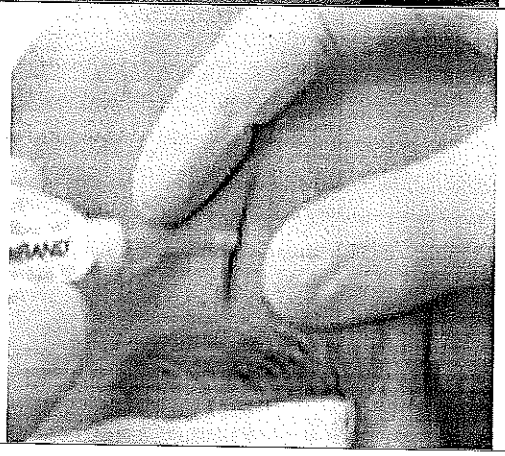
2. **Retained enema: -**
   A. Stimulant enema
   B. Nutrient enema
   C. Emollient enema
   D. Sedative enema
   E. Anaesthetic enema

## Section – C

04X06 = 24 Marks

Q.1. **Describe the sutures.**

| | |
|---|---|
| **Sutures (Stitches)**<br>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. |  |

| | |
|---|---|
| **Staples**<br>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. |  |
| **Steri-Strips**<br>Steri-Strips are adhesive strips used to bring the edges of an incision together. The strips should<br>be placed with enough space between them to allow drainage. Steri-Strips should be kept dry for the first 24 hours, but you may usually shower after that. They will usually fall off in 7 to 10 days. |  |
| **Tissue or Skin Adhesives**<br>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. |  |

Q.2. **Describe the general instruction of deal with sterile material.**

**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. Write the four uses and risk and potential problem of urinary catheterization.**

**Urinary Cathererization**

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.

**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.

**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.

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.

Constipation is a common gastrointestinal condition. It occurs when the colon is unable to remove waste through the rectum. People with this condition have three or fewer bowel movements over a seven-day period. Mild constipation often occurs when you don't eat enough fiber or drink enough water on a regular basis. Daily exercise also helps to prevent constipation.

An enema administration is most commonly used to clean the lower bowel. However, this is normally the last resort for constipation treatment. If diet and exercise are not enough to keep it regular, laxative are recommend before using an enema. In some cases, laxatives are used the night before an enema administration to encourage waste flow.

**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.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**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. **Tissue adhesive also known as:**

a) Plaster adhesive b) Staples adhesive

c) Skin adhesive d) Wound adhesive

Q.2. **Which type of catheter is generally used for the client with urine retention?**

a) Indwelling catheter b) Coude catheter

c) Straight catheter d) Three way

Q.3. **When are absorb absorbable suture?**

a) Within 12-14 weak b) Within 4 to 8 weak

c) Within 19-12 weak d) Only 2 weak

Q.4. **Which position is used while administering urinary catheterization in a patient?**

a) Right lateral positioning b) Left lateral positioning

c) Dorsal recumbent position d) Supine positioning

Q.5. **Indwelling catheterization is known as:**

a) Single lumen catheter b) Double lumen catheter

c) Three lumen catheter d) K-90 catheter

Q.6. **Nylon suture is:**

a) Absorbable suture b) temporarily suture

c) Non absorbable suture d) Both a and b

Q.7. **How much temperature is required in enema solution for adults?**

a) $100^0$-$101^0$ F b) $90^0$-$95^0$ F

c) $105^0$-$110^0$ F d) $80^0$-$85^0$

Q.8. **In an adult, enema tube should be inserted inside the rectum up to:**

a) 1-2 inches b) 3-4 inches

c) 5-6 inches d) 7-8 inches

Q.9. **What is the indication enema?**

a) To stop hemorrhage

b) To reduce hyperkalemia

c) To reduce portal systemic encephalopathy

d) All of above

Q.10. **All the following are the reason for administrating an enema, except:**

a) Relieve constipation

b) Weight loss

c) Prevent escape of fecal material during surgical procedure

d) Establish a bowel training programme

## Section – B

04X04 = 16 Marks

Q.1. Write down the four general instruction of deal sterile material.

Q.2. What is included in HCAI?

Q.3. Write the four contraindications of enema.

Q.4. Write down the types of enema.

## Section – C

04X06 = 24 Marks

Q.1. Describe the sutures.

Q.2. Define asepsis. Describe the aseptic technique vs clean technique

Q.3. Define urinary catheterization. Write the four uses and risk and potential problem of urinary catheterization.

Q.4. Describe why sometimes sterile gloves are needed.

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# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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Q.2. **What is included in HCAI?**

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- central line-associated bloodstream infection
- *Clostridium difficile* infection
- surgical site infection
- ventilator-associated pneumonia

Q.3. **Write the four contraindications of enema.**

**Contraindications**

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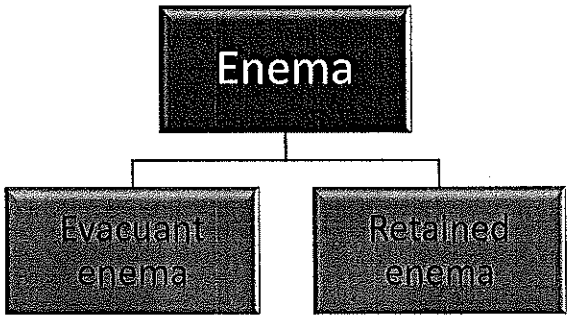
**Types of enema: -**




1. **Evacuant enema: -**

A. Simple enema
B. Medicated evacuant enema: - it is five type of medicated enema .
   i. Oil enema
   ii. Purgative enema
   iii. Astringent enema
   iv. Anthelmintic enema
   v. Carminative enema
C. Cold enema

2. **Retained enema: -**

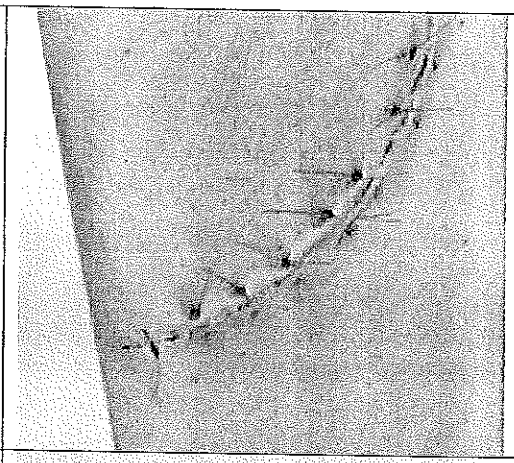
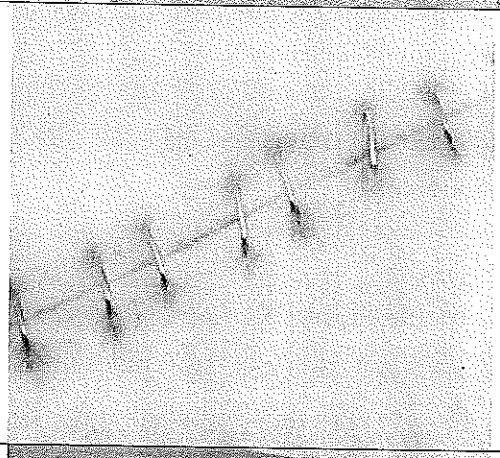
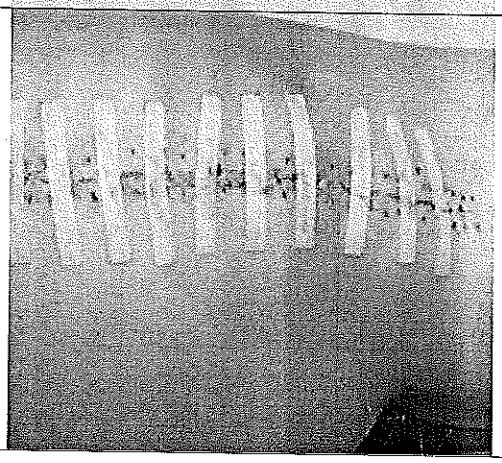
   A. Stimulant enema
   B. Nutrient enema
   C. Emollient enema
   D. Sedative enema

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

## Section – C

04X06 = 24 Marks

Q.1. **Describe the sutures.**

| | |
|---|---|
| **Sutures (Stitches)**<br>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. |  |
| **Staples**<br>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. |  |
| **Steri-Strips**<br>Steri-Strips are adhesive strips used to bring the edges of an incision together. The strips should<br>be placed with enough space between them to allow drainage. Steri-Strips should be kept dry for the first 24 hours, but you may usually shower after that. They will usually fall off in 7 to 10 days. |  |

**Tissue or Skin Adhesives**

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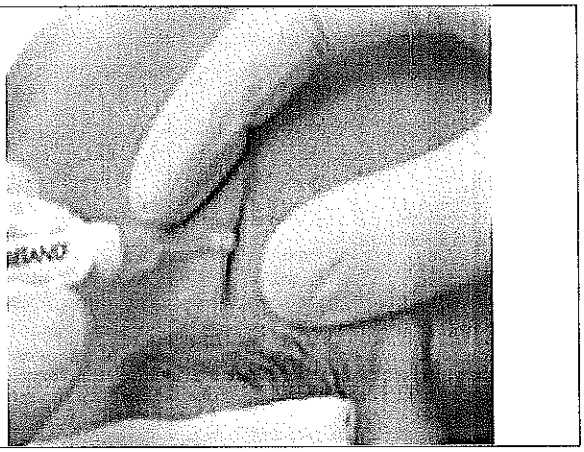

Q.2. **Define asepsis. Describe the aseptic technique vs clean technique**

**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 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.

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.3. **Define urinary catheterization. Write the four uses and risk and potential problem of urinary catheterization.**

**Urinary Cathererization**

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.

**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.

**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.

Q.4. **Describe why sometimes sterile gloves are needed.**

**Sterile gloves**

Sterile gloves are gloves that are free from all microorganisms. They are required for any invasive procedure and when contact with any sterile site, tissue, or body cavity is expected. Sterile gloves help prevent surgical site infections and reduce the risk of exposure to blood and body fluid pathogens for the health care worker. Studies have shown that 18% to 35% of all sterile gloves have tiny holes after surgery, and up to 80% of the tiny puncture sites go unnoticed by the surgeon. Double gloving is known to reduce the risk of exposure and has become common practice, but does not reduce the risk of cross-contamination after surgery.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

**School of Health Care and Paramedics Skills**

**Session: 2021-22 (Summer Semester)**

**B. Voc. Program, 1st Semester,**

**End-Sem. Examination**

**Course Code: SHP1110** **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. **Cardinal sign of diabetes mellitus except:**

a) Polydipsia b) Polyphagia

c) Polyuria d) Weight loss

Q.2. **Most common symptom of Parkinson's disease is:**

a) Weight loss b) Stiffness of muscle

c) Tremor's d) Dizziness

Q.3. **Patient with diabetes will need which item monitored on a more frequent basis:**

a) Eyesight b) Blood glucose

c) Urea d) Heart rate

Q.4. **Normal level of fasting blood sugar:**

a) 70 – 110 ml/dl b) 100 – 120 ml/dl

c) 60 – 180 ml/dl d) 120 – 160 ml/dl

Q.5. **During the tonic clonic seizures, the tonic phase is characterized by:**

a) Confusion b) Jerking of the extremities

c) Loosing consciousness d) Stiffness of the body

Q.6. **Which of the following is a specific investigation of detect seizures?**

a) CT Scan b) MRI Scan

c) EEG d) X-ray

Q.7. **First aid treatment for a patient of epilepsy is:**

a) To protect the patient b) To clean the airway

c) To provide rest and comfort d) To give medicine

Q.8. **Blood sugar is refers to:**

a) Fructose b) Glucose

c) Glycogen d) Lactose

Q.9. **What is the mode of administration of insulin injection?**

a) Intradermal
b) Subcutaneous
c) Intrathecal
d) Intramuscular

Q.10. **"Mask like face" is related to which disease?**

a) Tetanus
b) Hypothyroidism
c) Parkinson's disease
d) Down's syndrome

## Section – B

04X04 = 16 Marks

Q.1. Define Parkinson's disease. Write down the four causes and symptoms of Parkinson's disease.

Q.2. Difference between the diabetes type I and type II.

Q.3. Explain the tremors.

Q.4. Define epilepsy. Describe the pathology of seizure.

## Section – C

04X06 = 24 Marks

Q.1. Explain the treatment of diabetes mellitus type I and II.

Q.2. Consequences when taking care for people with Parkinson.

Q.3. Define epilepsy. Describe the partial and generalized seizure.

Q.4. What is difference between the hyperglycemia and hypoglycemia.

# BHARTIYA SKILL DEVELOPMENT UNIVERSITY

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**End-Sem. Examination**

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a) Tetanus

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**c) Parkinson's disease**

d) Down's syndrome

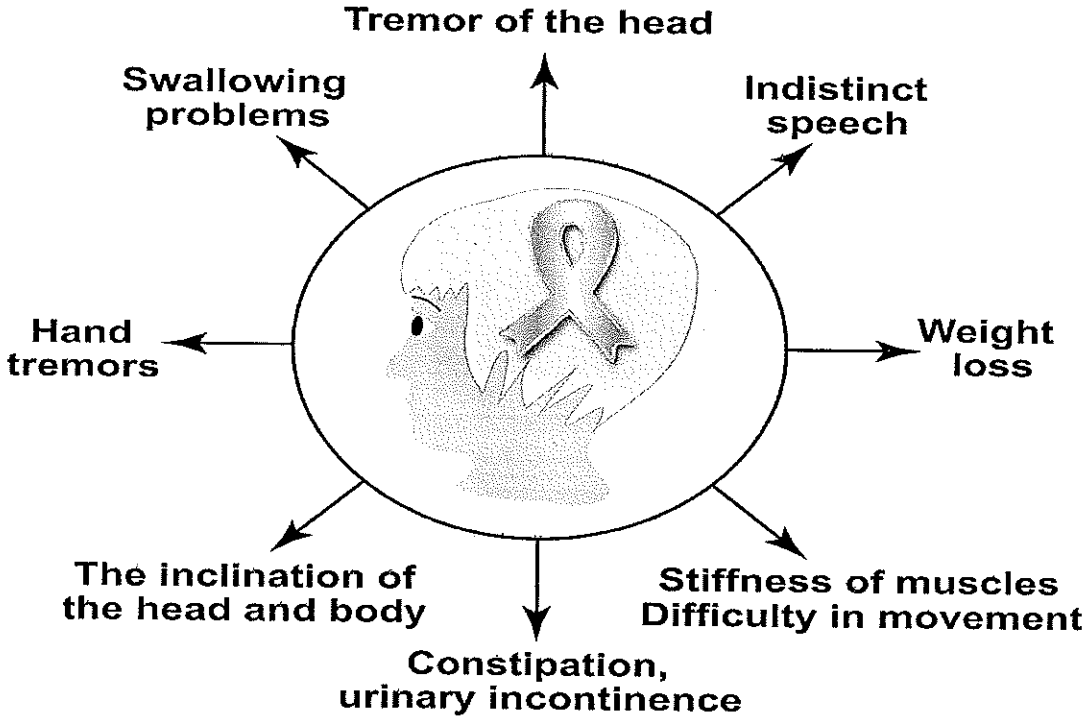
## Section – B

04X04 = 16 Marks

Q.1. Define Parkinson's disease. Write down the four causes and symptoms of Parkinson's disease.

**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.



Q.2. **Difference between the diabetes type I and type II.**

**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.

**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).

Q.3. **Explain the tremors.**

**Tremor**

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.4. **Define epilepsy. Describe the pathology of 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.

**Pathology**

Symptomatic epilepsy is associated with definable brain lesions. These lesions include zones of neuronal loss and gliosis (scars) or other signs of tissue loss. The frequency of occurrence of these lesions is not fully known. Epileptogenesis refers to the transformation of a normal neuronal network into one that is chronically hyperexcitable. There is a delay of months to years between an initial CNS injury such as trauma, stroke, or infection and the first seizure. The injury may lower the seizure threshold in the affected area until a spontaneous seizure takes place. In many genetic and idiopathic forms of epilepsy, epileptogenesis may be determined by developmentally regulated events.

The most common histological finding in the brains of epileptic patients is a bilateral loss of neurons in the CA1 segment (Sommer sector) of the pyramidal cell layer of the hippo-campus, extending into the contiguous regions of both the pyramidal layer and the underlying dentate gyrus. In a specific group of epileptic disorders, idiopathic epilepsy may be caused by a disruption of ion channels by neurotransmitter receptors.

A more complex genetic element is also identified in several childhood seizure disorders, for instance, absence epilepsy with 3-per-second spike-and-wave discharges and benign epilepsy of childhood with centrotemporal spikes. Both of these disorders are transmitted as autosomal dominant traits with incomplete penetrance, perhaps in a more complicated manner. Gene mutations observed in symptomatic epilepsy appear to be associated with pathways affecting CNS development or neuronal homeostasis. In patients with symptomatic epilepsy, other neurological abnormalities, such as cognitive impairment, coexist with seizures. The challenge is to identify the multiple susceptibility genes that underlie the more common forms of idiopathic epilepsies.

## Section – C

04X06 = 24 Marks

Q.1. **Explain the treatment of diabetes mellitus type I and II.**

**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. |

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 partial and generalized seizure.**

**Partial**

Partial seizures are confined to discrete areas of the cerebral cortex; only a certain area of the body is usually involved, at least at the start. By contrast, generalized seizures are noted in diffuse regions of the brain. Simple partial seizures cause motor, sensory, autonomic, or psychic symptoms without an obvious alteration in consciousness. These seizures may also be manifested as changes in somatic sensation (e.g., paresthesias or tingling), vision, equilibrium, autonomic function olfactory changes, and hearing. Complex partial seizures are characterized by focal seizure activity, accompanied by transient impairment of the patient's ability to maintain normal contact with the environment. Partial seizures can spread to involve both cerebral hemispheres and may produce a generalized seizure, usually of tonic–clonic variety. Secondary generalization is often observed following simple partial seizures, especially those with a focus in the frontal lobe.

**Generalized**

Generalized seizures arise from both cerebral hemispheres simultaneously. Absence seizures (petit mal) are characterized by sudden, brief lapses of consciousness without loss of postural control. The seizure typically lasts for only seconds; consciousness returns as suddenly as it was lost, and there is no postictal confusion. Atypical absence seizures have features that deviate clinically and electro physiologically from typical absence seizures. For example, the lapse of consciousness is usually of longer duration and less abrupt in onset and cessation.

A simple absence seizure is defined as a brief clouding of the sensorium, or loss of consciousness, accompanied by certain generalized epileptic discharges without other detectable clinical signs. A complex absence seizure indicates that other signs are also present. Generalized, tonic–clonic seizures

(formerly grand mal) are the main seizure type in approximately 20% of all persons with epilepsy. They are also the most common seizure type resulting from metabolic derangements and are therefore frequently encountered in many different clinical settings. Atonic seizures are characterized by sudden loss of postural muscle tone lasting 1 to 2 seconds. Consciousness is briefly impaired, but there is usually no postictal confusion. Myoclonus is a sudden and brief muscle contraction that may involve one part of the body or the entire body.

Q.4. **What is 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<br>Polyuria, glycosuria<br>Deep breathing with acetone odour (type 1 only) | Cold sweat<br>restlessness, muscle tingling<br>hot starvation, Apathy<br>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)<br>Possibly. Orange juice when the blood glucose level is not too low<br>Blood glucose control<br>As soon as possible, eat a piece of whole grain or fruit<br>If unconscious, call a qualified nurse or doctor |

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## Section – A

10X01 = 10 Marks

Q.1. **Parkinson's disease (PD) was first described by Dr. James Parkinson in:**

a) 1817 b) 1872

c) 1995 d) 1875

Q.2. **A shuffling gait is typically associated with patient who has:**

a) Parkinson's disease b) Multiple sclerosis

c) Reynaud disease d) Down's syndrome

Q.3. **symptom of diabetes except:**

a) Increase thirst b) Increased hunger

c) Blurred vision d) Weight gain

Q.4. **Hypoglycemia is known as:**

a) Decrease the glucose level b) Increase the glucose level

c) Normal blood sugar d) Increase the sugar

Q.5. **If you have had a seizure, it means you have epilepsy:**

a) True b) False

Q.6. **What is the most common type of seizures?**

a) The grand mal seizure b) The absence seizure

c) The complex seizure d) The simple seizure

Q.7. **Parkinson disease is marked by a lack of which chemical in the brain?**

a) GABA b) Serotonin

c) Dopamine d) Acetylcholine

Q.8. **Full form of EEG:**

a) Electroencephalographic b) Electroenseptic gram

c) Electroencephalography d) Electicalencephalography

Q.9. **The nurse is caring for an adult admitted with a diagnosis of a brain tumor. Shortly after her admission, the client suffers a seizure. The nurse's initial intervention must be directed towards:**

a) Controlling of seizure

b) Protecting the client

c) Restraining the client

d) Reducing circulation to the brain

Q.10. **Myoclonic means is:**

a) starting spells

b) Sudden muscle jerks

c) Abrupt falls

d) None of above

## Section – B

04X04 = 16 Marks

Q.1. What do you by diabetes mellitus type II

Q.2. Write down the medical treatment of epilepsy.

Q.3. What do you understand by bradykinesia?

Q.4. Define Parkinson's. Write down the therapy of Parkinson's.

## Section – C

04X06 = 24 Marks

Q.1. Explain the clinical presentation of Parkinson's disease.

Q.2. Consequences when taking care for people with Parkinson.

Q.3. Define diabetes mellitus. Write down the four causes, symptom, and treatment of diabetes mellitus.

Q.4.Describe the support measure of Parkinson's patient.

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## Section – B

04X04 = 16 Marks

Q.1. **What do you by diabetes mellitus type II.**

**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).

Q.2. **Write down the medical treatment of epilepsy.**

**Medical Treatment**

Antiepileptic drug (AED) therapy, the mainstay of treatment for most patients, has four goals: to eliminate seizures or reduce their frequency to the maximum degree possible, to evade the adverse effects associated with long-term treatment, and to aid patients in maintaining or restoring their usual psychosocial and vocational activities, and in maintaining a normal lifestyle. The decision to start AED therapy should be based on an informed analysis of the likelihood of seizure recurrence, the consequences of continuing seizures for patients, and the beneficial and adverse effects of the pharmacological agent chosen.

Whether to initiate therapy in a patient with a single seizure is controversial. A single seizure caused by an identified lesion such as a CNS tumor, an infection, or trauma, in which there is strong evidence that the lesion is epileptogenic, should be treated. The overall goal of AED therapy is to prevent seizures completely.

Q.3. **What do you understand by bradykinesia?**

**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.4. **Define Parkinson's. Write down the therapy of Parkinson's.**

**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.

**Therapy**

A cure of the Parkinson's is not possible, however, medication can improve the symptoms. The drug Madopar®, which is an artificial substitute for the chemical transfer agent dopamine, is used in the first place. Drug therapy is supplemented by the support and promotion of independence by means of exercise exercises, walking training as well as specific therapies through physio-, ergo- and speech therapy. The psychosocial accompaniment and support of the affected person as well as their relatives is extremely important because Parkinson's disease is a chronically progressive disease, that is, symptoms become more and more pronounced over time.

## Section – C

04X06 = 24 Marks

Q.1. **Explain the clinical presentation of Parkinson's disease.**

**Clinical Presentation**

PD may begin insidiously, with early symptoms presenting in up to 90% of patients in a subtle fashion, such as difficulty getting out of a chair. Nonmotor symptoms may be misinterpreted as related to normal aging or other comorbidities, thereby delaying the diagnosis. The early disease phase lasts approximately four to six years on average and may include nonmotor features, as described previously. As the disease progresses, other clinical signs, including thermoregulatory dysfunction, may occur. Although intolerance to cold is common, thermoregulatory abnormalities can also include profuse sweating. Nociceptive (musculoskeletal) and neuropathic pain may occur in some patients in early or later stages of the disease.

As noted in the section on diagnosis, the triad of clinical motor features in PD patients includes tremor, rigidity, and bradykinesia. Of these three core features, tremor is most often recognized by patients and caregivers, especially in individuals with the tremor-predominant PD subtype. The motor presentations of PD may correlate with the patient's age at onset; specifically, tremor at onset is twice as common in patients older than 64 years compared with those younger than 45 years of age. In addition, complications related to the duration of treatment—for example, the association of dystonias and dyskinesias with the length of levodopa therapy—are more common in patients diagnosed at younger ages (45 to 55 years old).

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. **Define diabetes mellitus. Write down the four causes, symptom, and treatment of diabetes mellitus.**

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.

When sugar leaves the bloodstream and enters the cells, the blood sugar level is lowered. Without insulin, or the "key," sugar cannot get into the body's cells for use as energy. This causes sugar to rise. Too much sugar in the blood is called "hyperglycemia" (high blood sugar).

**Causes**

The causes of diabetes are not known. The following risk factors may increase your chance of getting diabetes:

- Family history of diabetes
- African-American, Hispanic, Native American, or Asian-American race, Pacific Islander or ethnic background
- Being overweight
- Physical stress (such as surgery or illness)
- Use of certain medications, including steroids
- Injury to the pancreas (such as infection, tumor, surgery or accident)
- Autoimmune disease
- High blood pressure
- Abnormal blood cholesterol or triglyceride levels
- Age (risk increases with age)
- Smoking
- History of gestational diabetes

It is important to note that sugar itself does not cause diabetes. Eating a lot of sugar can lead to tooth decay, but it does not cause diabetes.

**Symptoms**

The symptoms of diabetes include:

- Increased thirst
- Increased hunger (especially after eating)
- Dry mouth
- Frequent urination
- Unexplained weight loss (even though you are eating and feel hungry)
- Weak, tired feeling
- Blurred vision
- Numbness or tingling in the hands or feet
- Slow-healing sores or cuts
- Dry and itchy skin
- Frequent yeast infections or urinary tract infections

**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. |

| | | |
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| **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.<br>Take measures to avoid infections. Check for wounds and seek early treatment.<br>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. |

Q.4. **Describe the support measure of Parkinson's patient.**

**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.
- 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.