BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of Health Care & Paramedics

Session: 2018-19 (Summer Semester)

Diploma 1st Semester,

End-Sem. Examination

Time: 1.5*2 Hours

Max. Marks: 50*2

Instruction:

1. **SECTION-A:** 10 objective type questions, each question carries 01 mark
2. **SECTION-B:** 04 short answer type questions, each question carries 05 marks
3. **SECTION-C:** 02 Essay answer type questions, each question carries 10 marks

SET-A

Course Code: MNA1101

Course Name: Anatomy physiology & professional behavior

Section – A

10X01 = 10 Marks

Q.1. What are the functions of insulin?

a) The breaking down of glycogen into glucose
b) Absorb glucose
c) The breaking down of fat to produce energy
d) Promoting the ripening of sperm

Q.2. Which cranial nerve is responsible for smelling?

a) Vagus
b) optic
c) olfactory
d) oculomotor

Q.3. Respiratory Centre is present in which part of the brain?

a) Pons
b) Thalamus
c) Hypothalamus
d) Medulla oblongata

Q.4. Which hormone is responsible to regulate the salt and water balance?

a) oxytocin
b) ACTH
c) prolactin
d) Aldosterone

Q.5 Normal blood pH level is:

a) 5.1 to 5.7
b) 7 to 7.3
c) 7.35 to 7.45
d) 8.35 to 9.35

Q.6. Which of the following pigment found in the skin?

a) keratin
b) collagen
c) Elastin
d) Melanin

Q.7. Which enzyme is present in saliva?

a) Chymase
b) Pepsin
c) saliva
d) Amylase

Q.8. What is femur bone?

a) Upper arm bone
b) Upper leg bone
c) Skull bone
d) Coller bone

Q.9. The Life span of RBC...

a) 100 days
b) 120 days
c) 110 days
d) 130 days

Q.10. Inner most layer of the skin....

a) Dermis
b) Epidermis
c) Hypodermis
d) Subcutaneous

Section – B

04X05 = 20 Marks

Q.1. Define tissue. Explain epithelial tissue.

Q.2. Explain cerebrospinal fluid.

Q.3. Write down the name of upper and lower respiratory tract.

Q.4. Write five functions of bone.

Section – C

02X10 = 20 Marks

Q.1. Explain the male internal genital organs.

Q.2. Explain the digestive organs with the help of a diagram.

SET-B

Course Code: MNA1104

Course Name: Nutrition and support in feeding

Section – A

10X01 = 10 Marks

Q.1. Hematuria is known as...

a) Yellow color urine
b) Urine with pus
c) Urine with blood
d) All of above

Q.2. Dysphasia is known as...

a) Loss of appetite
b) Loss of movement
c) Difficulty in swallowing
d) Difficulty in eating

Q.3. Inflammation of urinary bladder is known as....

a) Carcinoma
b) Cystitis
c) Endocystitis
d) Cholecystitis

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Q.4. Full form of BMI...

a) Body mass indicate
b) Body measurement indicate
c) Body mass index
d) None of above

Q.5. What do you mean by enteral nutrition?

a) By oral
b) By gastric
c) By duodenal
d) All of above

Q.6. Normal urine colour is...

a) Pale yellow
b) Dark yellow
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a) 1010 - 1025 mg/ml
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a) Percutaneous endoscopic gastrostomy
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c) a and b both
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Q.9 How much water is required per day by an adult?

a) 2500 ml
b) 3000 ml
c) 1000 ml
d) 1800 ml

Q.10. BMI of 15 indicate which status?

a) Normal weight
b) Obesity
c) Underweight
d) Moderate under weight

Section – B

04X05 = 20 Marks

Q.1. Define Nutrition. Explain the influencing factor of nutrition.

Q.2. Weight of a man is 35 kg and height is 158 cm. Calculate his BMI using the formula and indicate the condition.

Q.3. Define excretion. Explain the influencing factors of excretion.

Q.4. Write down the eight principles of tube feeding.

Section – C

02X10 = 20 Marks

Q.1. Explain food pyramid with the help of a diagram.

Q.2. Define cystitis. Explain the causes, symptoms and prevention of cystitis.

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b) Epidermis
c) Hypodermis
d) Subcutaneous

Section – B

04X05 = 20 Marks

1. **Define tissue. Explain epithelial tissue.**

Tissues: -

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.**

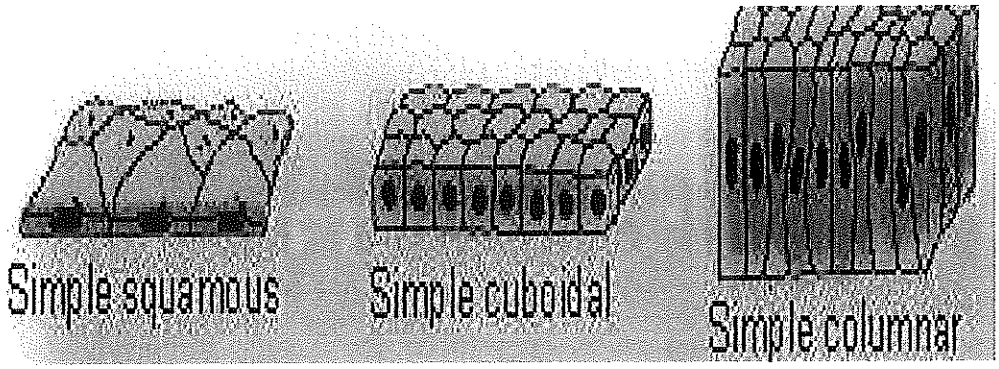
1. **Epithelial tissue or epithelium: -** This group of tissues is found covering the body and lining cavities, hollow organs and tubes.

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.



A. **Squamous epithelium:** - This is composed of a single layer of flattened cells. forming a thin and very smooth membrane.
B. **Cuboidal epithelium:** - This consist of cube – shaped cells fitting closely together lying on a membrane.
C. **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

a) **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.
b) **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.

2. Explain cerebrospinal fluid.

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.

3. **Write down the name of upper and lower respiratory tract.**

Overview of the structure of the respiratory system: -

Upper respiratory tract: -

- Nose
- Pharynx

Lower respiratory tract: -

- Larynx
- Trachea
- Two bronchi (one bronchus to each lung)
- Bronchioles and smaller air passages
- Two lungs and their coverings, the pleura
- Muscles of breathing – the intercostal muscles and the diaphragm.

4. **Write five functions of bone.**

Bone: -

Although bones are often thought to be static or permanent, they are highly vascular living structures that are continuously being remodelled.

Function: -

- Provision of the framework of the body
- Giving attachment to muscles and tendons
- Allowing movement of the body as a whole and of parts of the body, by forming joints that are moved by muscles
- Haemopoiesis, the production of blood cells in red bone marrow
- Mineral storage, especially calcium phosphate

Section – C

02X10 = 20 Marks

1. **Explain the male internal genital organs.**

Male sexual organs and sex – specific characteristics are:

Internal sexual organs	Testes, epididymis, vas deferens, prostate gland, seminal vesicles.

Male sexual organs

Overview: -

Testes: -

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

Function: -

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

Epididymis: -

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

Vas deferens: -

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

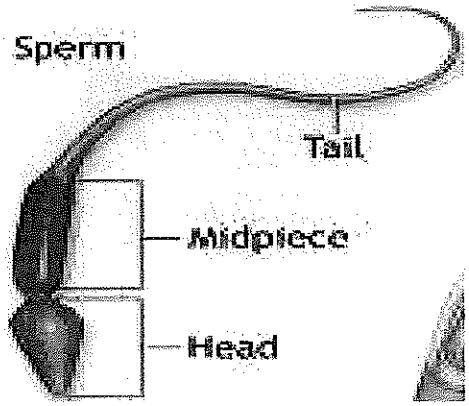
Penis: -

The penis is the male copulative organ. It is subdivided in to the body of the penis and the glans.

Sperm: -

Sperm are cells which have a flagellum (tail). They have total length of 1/20 mm. in the fallopian tube, a sperm remains able to fertilise an ovum for up to five days.

The sperm is made up of a head, neck, mid-piece, principal piece and endpiece.



Ejaculation: -

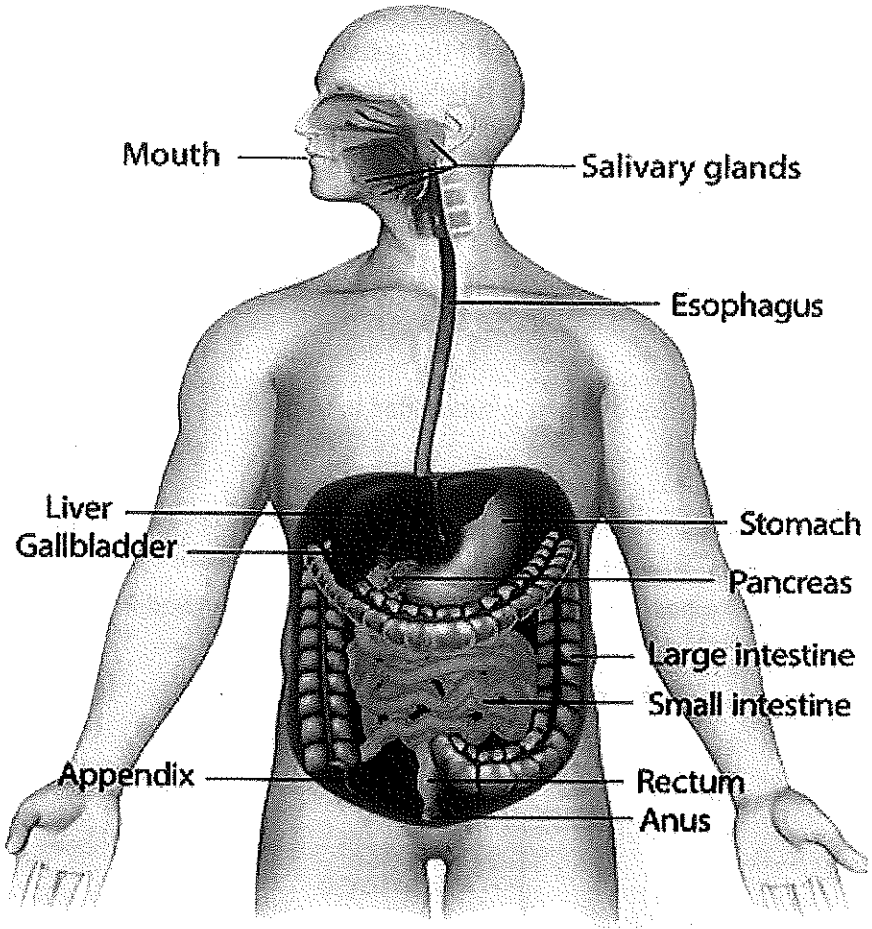
When ejaculation takes place, the muscle of the tubule of the epididymis, vas deferens, seminal vesicles, prostate gland and cavernous bodies all contract. The volume of semen is in the region of 2-5 ml. it contains up to 500 million sperm as well as fluid.

Testosterone: -

Testosterone is the male sex hormone. It is mainly in the testicles. Only small quantities are produced in the adrenal gland.

2. Explain the digestive organs with the help of a diagram.

Overview of the organs of the digestive system: -



Mouth: -

The mouth or oral cavity is bounded by muscles and bones. We use our mouth to ingest food. The food is then mixed with saliva from the salivary gland. Chemical digestion starts in the mouth where starch and glycogen are broken down by the amylases in the saliva. Amylase are special enzyme which break down carbohydrates to make these available to the body.

Teeth: -

The teeth are embedded in the alveoli or sockets of the alveolar ridges of the mandible and the maxilla. Babies are born with two sets, or dentitions, the temporary teeth and the permanent teeth.

Function: -

Teeth have different shapes depending on their functions.

- Incisors and canine teeth are the cutting teeth and are used for biting off pieces of food, whereas the premolar and molar teeth, with broad, flat surfaces, are used for grinding or chewing food.

Tongue: -

The tongue is a muscular organ. The tongue covered with a mucous membrane. The tongue's functions include the sensation of taste and the perception of mechanical stimuli, temperature and pain.

Salivary gland: -

Salivary glands release their secretions into ducts that lead to the mouth. This makes the food slippery and flavourings are dissolved. Saliva contains the enzyme ptyalin (an amylase).

The salivary glands are arranged in pairs. A distinction is made between:

- Parotid gland
- Submandibular salivary gland
- Sublingual salivary gland

Oesophagus: -

The oesophagus is about 25 cm long and about 2 cm in diameter and lies in the median plane in the thorax in front of the vertebral column behind the trachea and the heart. The thoracic cavity into the abdomen, connecting the throat (pharynx) with the stomach.

The inner surface of the oesophagus is a mucous membrane and ring like muscle layer.

Function: -

- The oesophagus is to transport food.
- The food is moved through the oesophagus by means of the alternating contraction of the longitudinal and ring like muscle.
- These wave like movement are called peristalsis.

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.

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).

Pancreas: -

The pancreas has a dual role as both a digestive and an endocrine gland. The pancreas is a pale grey gland weighing about 60 grams. It is about 12 to 15 cm long and is situated in the epigastric and left hypochondriac regions of the abdominal cavity.

As a **digestive gland** it produces substances which neutralise the gastric juice, as well as enzyme to digest carbohydrates, protein and fats.

As an **endocrine gland** the pancreas produces insulin and glucagon.

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.

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.

Small intestine: -

The small intestine is continuous with the stomach at the pyloric sphincter. The small intestine is a little over 5 meters long and leads into the large intestine at the ileocaecal valve. It lies in the abdominal cavity surrounded by the large intestine. In the small intestine the chemical digestion of food is completed and absorption of most nutrients takes place. It is divided into three section.

- **Duodenum:** - The duodenum is about 25 cm long and curves around the head of the pancreas.
- **Jejunum:** - The jejunum is the middle section of the small intestine and is about 2 meters long.
- **Ileum** The ileum, or terminal section, is about 3 meters long and ends at the ileocaecal valve,

Large intestine: -

The large intestine surrounds the small intestine like a frame and is 1.5 – 1.8 m long. The large intestine is the last station of the digestive system. It contains many bacteria which can break down indigestible substance or produce vitamin (eg. Vitamin k). large intestine divided in into:

large intestine divided in into:

- Caecum
- Colon
- Sigmoid colon
- Rectum
- Anal canal

Functions: -

- Thickens the contents of the intestine by absorbing water and mineral.
- Forming faeces.

SET-B

Course Code: MNA1104

Course Name: Nutrition and support in feeding

Section – A

10X01 = 10 Marks

Q.1. Hematuria is known as...

a) Yellow color urine
b) Urine with pus
c) Urine with blood
d) All of above

Q.2. Dysphasia is known as...

a) Loss of appetite
b) Loss of movement
c) Difficulty in swallowing
d) Difficulty in eating

Q.3. Inflammation of urinary bladder is known as....

a) Carcinoma
b) Cystitis
c) Endocystitis
d) Cholecystitis

Q.4. Full form of BMI...

a) Body mass indicate
b) Body measurement indicate
c) Body mass index
d) None of above

Q.5. What do you mean by enteral nutrition?

a) By oral
b) By gastric
c) By duodenal
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Q.6. Normal urine colour is...

a) Pale yellow
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Q.9 How much water is required per day by an adult?

a) 2500 ml
b) 3000 ml
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Q.10. BMI of 15 indicate which status?

a) Normal weight
b) Obesity
c) Underweight
d) Moderate under weight

Section – B

04X05 = 20 Marks

Q.1. Define Nutrition. Explain the influencing factor of nutrition.

Definition:

a) Nutrition is the science or practice of consuming and utilizing foods.
b) Nutrition is the science that interprets the interaction **of** nutrients and other substances in food in relation to maintenance, growth, reproduction, health.

1.2 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

A. Biological factors

- Age
- Physical state, e.g. pain, appetite or feeling of hunger
- Functional efficiency of the digestive System
- Physical activity and personal basal metabolic rate
- Senses of smell and taste

- Eyesight Diseases or disabilities

B. Psychological factors

- State and mood at the time in question
- Personal habits, preferences and dislikes
- Visual appeal of food
- Mental and intellectual capabilities
- Fears, e.g. the food could be poisoned

C. Environmental factors

- Tidiness or arrangement in the room and on the table
- Location where food is being eaten, e.g. at a table or in bed
- Range and variety of food
- Quality of the food and drinking water
- Decoration of the table
- Presentation of the food on the plate

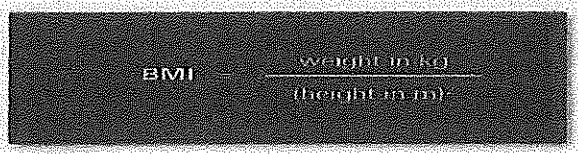
D. Sociocultural factors

- Influences of family and upbringing. Insisting that everything on the plate should be eaten
- Advertising and society 's norms about body Image and the beauty ideal
- Dietary laws for practising believers of certain religions, e.g. meat, alcohol etc.
- Occasion and social aspect of food
- Housing situation, e.g. several generations sharing the same accommodation
- Eating meals alone or with others
- Social class, financial means

c

Body mass index

Fig. 6 Calculating the BMI



35/1.58*1.58 = 35/2.49 = 14.05

Your result 14.05.

BMI of less than 18.5kg/m²

A BMI of less than 18.5 indicates that you are underweight, so you may need to put on some weight. You are recommended to ask your Doctor or a dietician for advice.

Q.3. Define excretion. Explain the influencing factors of excretion.

Definition: The process of eliminating or expelling of waste material from body.

6.2 Influencing factors

The examples below show some of the things that can influence excretion.

Biological factors

Stage of development and age, quality and quantity of food and fluid intake, physical activity, function of the autonomic nervous system, state of the urinary and digestive system

Psychological factors

Feelings and sensitivities, mental faculties, attitude to life and outlook

Environmental factors

Living conditions, state of hygiene of toilet facilities

Sociocultural factors

Social taboos and feelings of shame, upbringing and socialization, precepts of various religions as regards, for example, wiping one 's posterior

Q.4. Write down the eight principles of tube feeding.

2.1 Principles of Tube Feeding

- Prepare the food according to the prescription.
- Check the expiration date.
- If necessary, warm the tube food to room temperature (in the water bath, not in the microwave).
- Shake the food before use (observe the instructions on the package).
- Inform the patient about the dosage administration.
- Store up the upper body of the patient.
- Perform oral hygiene to promote salivary secretion.
- Remove the cap.
- Check the tube location (using the stethoscope and / or aspiration of gastric juice).
- Check the food transport of the last meal by aspiration.
- Administer the following:
    - Do not allow air to enter the digestive tract (flatulence).
    - Observe the patient during administration (condition, nausea, breathing / coughing, abdomen).
    - Disassemble the syringe or transfer system.
    - Rinse the tube with at least 20 ml of still water.
    - Close the tube with the cap.
    - Check the fixation of the tube.
- Store the upper body of the patient about half an hour high.

Document the tube cost

Section – C

02X10 = 20 Marks

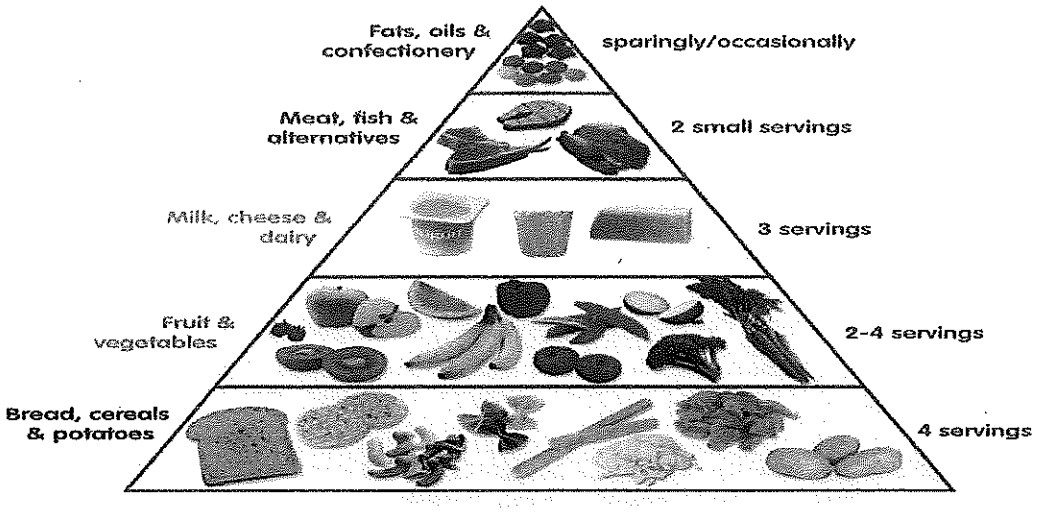
Q.1. Explain food pyramid with the help of a diagram.

1.4 The food pyramid

Exercise: Revise the anatomy/physiology of the digestive system.

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

Exercise: Write down what you have eaten over the course of a day. Divide the foods into the food pyramid



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

a) Drinks

Example: Mineral water, herbal tea, green tea, diluted fruit juice, tap water

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.

b) Fruit and vegetables

Examples: Cucumber, onions, red cabbage, broccoli, apples, pineapple, pears

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.

c) Grain products, pulses and potatoes

Examples: Bread, maize, pasta, rice, millet, barley, potatoes, soya, chickpeas

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.

d) Milk and dairy products

Examples: Yoghurt, soft cheese, milky drinks, hard cheese, soured milk

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.

e) Meat, fish, eggs, cheese and sources of vegetable protein

Examples: trout, meat, fried egg, seafood

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.

f) Oils and fats and nuts

Examples: Olive oil milk fat, sunflower seeds, rapeseed oil, avocado, butter

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).

g) Confectionery, salted snacks and high-energy drinks

Examples: Chocolate, salted peanuts, energy drinks, alcohol, ice cream, sugar lumps, cola, rasgulla other Indian sweets.

Foodstuffs from this level of the pyramid mainly provide us with a lot of energy, but no valuable nutrients. We should therefore enjoy these foods in moderation.

It is important to ensure that the portion sizes of these foods and drinks are kept small and that we do not get into the habit of satisfying our hunger with foods from this group.

Q.2. Define cystitis. Explain the causes, symptoms and prevention of cystitis.

Definition

Cystitis is an infectious inflammation of the urinary bladder

Causes

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

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

Both genders may experience cystitis as a result of urinary obstructions caused by urinary stones or narrowing of the urethra

Symptoms

The mucosa in the bladder responds by becoming red, swollen and hypersensitive. The extension that occurs during filling is experienced as a stimulus and emptying is duly triggered.

Common symptoms are pain during urination, pollakiuria and nocturia. Heavily inflamed and slightly bloody mucosa will lead ta hematuria. It is not unusual to experience pain in the lower abdomen too (above the symphysis).

Fever does not occur with uncomplicated urinary tract infections. Episodic bouts of fever should raise suspicions of pyelonephritis or urosepsis.

Prevention

A high fluid intake increases urinary excretion and is a good way of ensuring the efferent urinary tract is properly flushed out.

When passing water, It is important to empty the bladder completely. This prevents any significant proliferation of germs in residual urine.

Passing water after sexual intercourse flushes out the urethra and removes any bacteria transmitted.

Following a bowel movement, it is essential always to work from the front backwards when cleaning the anal area to prevent any intestinal bacteria accessing the urethra.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of Healthcare and paramedics

Session: 2018-19 (Summer Semester)

Diploma Semester,

End-Sem. Examination

Time: 45*4 Minutes

Max. Marks: 25*4

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 05 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 10 marks

SET- A

Course Code: MNA1102

Course Name: Hygiene and Safety & Support in personal hygiene

Section – A

05X01 = 05 Marks

Q.1. Founder of Nursing is:

a) Mother Teresa
b) Florence Nightingale
c) Theodore Fliedner
c) Frederike Fliedner

Q. 2. What is the duration for hand disinfection?

a) 30 second
b) 10 second
c) 50 second
d) 35 second

Q.3 Where would you put a contaminated dressing after use?

a) Blue waste bin
b) yellow waste bin
c) Red waste bin
d) Black waste bin

Q.4. Isolation is used for?

a) Contamination
b) Sterilization
c) Disinfection
d) Breaking the chain of infection

Q.5. Asepsis is known as...

a) Free from germ
b) Free from bacteria
c) Increase germ
d) None of above

Section – B

02X05 = 10 Marks

Q.1. Describe how to disinfect your hand.

Q.2. Define infectious diseases. Explain the causes of infectious diseases.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Section – C

01X10 = 10 Marks

Q.1. Define isolation. Explain the forms of isolation.

SET- B

Course Code: MNA1105

Course Name: Clinical Picture 1st

Section – A

05X01 = 05 Marks

Q.1. Full form of HAI...

a) Hospital allergy infection
b) Hospital acquired infection
c) Hospital acquired inspection
d) Hospital actual inspection

Q. 2. Oedema is known as...

a) Abnormal accumulation fluid in interstitial
b) Blood collection in cell
c) Bluish colour of skin
d) Redness of the skin

Q.3 Mycoses disease is caused by...

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

Q.4. Infection of kidney is known as...

a) Pyelonephritis
b) Cystitis
c) Pylocystitis
d) Pyelokidnetis

Q.5. Loss of appetite is known as...

a) Anorexia
b) Bulimia nervosa
c) Anorexia nervosa
d) None of above

Section – B

02X05 = 10 Marks

Q.1. Define nosocomial infection. Write down the mode of transmission and prevention of nosocomial infection.

Q.2. Define candidiasis. Explain the symptoms of candidiasis.

Section – C

01X10 = 10 Marks

Q.1. Define allergies. Explain the causes and symptoms of allergies.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

SET- C

Course Code: MNA1106

Course Name: First aid & CPR, Palliative care

Section – A

05X01 = 05 Marks

Q.1. What is the use of code blue in the hospital?

a) In case of cardiac arrest
b) In case of fire
c) In case of baby missing
d) In case of physical assult

Q. 2. Symptoms of burn grade 2nd.

a) Redness and blister, pain
b) Redness
c) charred, brunt on bones and muscle, no pain
d) Whitish or brownish black, no pain

Q.3. Full form of the Race is:

a) Rescue, contain, extinguish, alarm
b) Rescue, alarm, contain, extinguish
c) Rescue, extinguish, alarm, contain
d) Contain, rescue, extinguish, alarm

Q.4. Cyanosis is known as.

a) Redness
b) Inflammation
c) Bluish colour of skin
d) All of above

Q.5. Full form of CPR.

a) Cardio pulmonary resuscitation
b) Cardio pulmonary respiration
c) Cardiac pulse respiration
d) Circulatory pulmonary resuscitation

Section – B

02X05 = 10 Marks

Q.1. Define palliative care. Explain the stages of grieving.

Q.2. Define crash cart. Write down the phases and aims of emergency code.

Section – C

01X10 = 10 Marks

Q.1. Define emergency situation. Explain the three emergency situations.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

SET- D

Course Code: MNA1108

Course Name: Support the Patient in Breathing

Section – A

05X01 = 05 Marks

Q.1. Normal breath in newborn baby is:

a) 40-50 breath per minute
b) 25-30 breath per minute
c) 30-35 breath per minute
d) 35-45 breath per minute

Q. 2. Dyspnea is known as.

a) Increase the breathing
b) normal breath
c) Shortness of breathing
d) Increase the pulse rate

Q.3 Tuberculosis is caused by:

a) Mycobacterium tetani
b) Mycobacterium tuberculosis
c) Streptococcus bacteria
d) Salmonella typhi

Q.4. Maximum duration during the suction procedure is:

a) 10 Second
b) 15 Second
c) 25 Second
d) 12 Second

Q.5. According to priorities which position is used in pneumonia prophylaxis?

a) Prone position
b) Side lying position
c) VATI Position
d) Sitting position

Section – B

02X05 = 10 Marks

Q.1. Define breathing. Explain the factors influencing breathing.

Q.2. Define pneumonia. Explain the pneumonia prophylaxis measures.

Section – C

01X10 = 10 Marks

Q.1. Explain Chronic Obstructive Pulmonary Disease. Write down the four complications occur during oxygen administration.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of Healthcare and paramedics

Session: 2018-19 (Summer Semester)

Diploma Semester,

End-Sem. Examination

Time: 45*4 Minutes

Max. Marks: 25*4

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 05 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 10 marks

SET- A

Course Code: MNA1102

Course Name: Hygiene and Safety & Support in personal hygiene

Section – A

05X01 = 05 Marks

Q.1. Founder of Nursing is:

a) Mother Teresa
b) Florence Nightingale
c) Theodore Fliedner
c) Frederike Fliedner

Q. 2. What is the duration for hand disinfection?

a) 30 second
b) 10 second
c) 50 second
d) 35 second

Q.3 Where would you put a contaminated dressing after use?

a) Blue waste bin
b) yellow waste bin
c) Red waste bin
d) Black waste bin

Q.4. Isolation is used for?

a) Contamination
b) Sterilization
c) Disinfection
d) Breaking the chain of infection

Q.5. Asepsis is known as...

a) Free from germ
b) Free from bacteria
c) Increase germ
d) None of above

Section – B

02X05 = 10 Marks

Q.1. Describe how to disinfect your hand.

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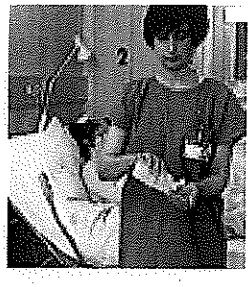
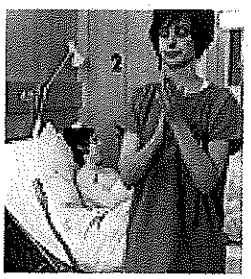
Hand hygiene:

Most infections are transmitted by the hands of nurses and medical staff. Correct hand disinfection reduces the risk of nosocomial infections. The hygiene guidelines, which must be followed strictly, are an integral part of the hygienic concept.

Hand infection is the most important measures to avoid the transmission of germs from one client to another. Hand hygiene also serves for self-protection. Only a correct hand hygiene is effective.

Procedure of Hand disinfection

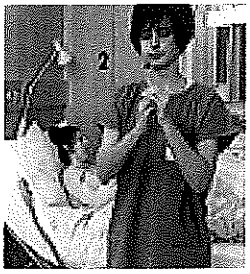
Actions	Description	Statements/Instructions
Before/Previously		
Preparation of your hands	Make sure that the hands are dry.	Moisture dilutes the disinfectant and damages the skin.
During		
Dosing disinfectants 	Take as much disinfectant from the dispenser as needed to fill your palm.	This way you will always have as much disinfectant as needed no matter the size of your hands.
Rubbing Hand disinfectant	Dispense the disinfectant quickly on both hands. Rub the disinfectant:	The disinfection time must last for at least 30 seconds.
	A Palm over/on palm	

A Right hand palm above the back of the left hand and vice-versa

A Palm on palm with interlocked and stiltedly fingers

A Embrace your right hand thumb with your left fingers and make rotating movements and vice versa

A Place the right hand palm above the back of left hand with stilted fingers and rub between your fingers and vice versa.



A Rotate clockwise and anti clockwise with the closed fingertips of right hand in the left hand palm and vice versa

Repeat the movement of every step 5 times

After the completion of the last step, the individual/single step are repeated till 30 seconds have elapsed.

Repeat all the movements till the disinfectant is completely rubbed and the hand are dry.	If the disinfectant dries of before the first sequence of steps are finished, retake disinfectant from dispenser.

Q.2. Define infectious diseases. Explain the causes of infectious diseases.

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

Causes: Various types of pathogens can cause an infection:

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

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

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

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

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

Insects :e.g. Pediculus capitis ⇒head lice.

Section – C

01X10 = 10 Marks

Q.1. Define isolation. Explain the forms of isolation.

Definition: Isolation can break the chain of infection for patients with infectious diseases as early as the pathogenic stage.

Forms of isolation (contact, droplet, aerogenic, protective)

The isolation measures required in a particular situation will depend on the following factors:

- on how infectious the pathogens are
- on the respective transmission route for the pathogens

- on the risk to the patient
- on the risk presented by the patient.

As such, the various types of Isolation can be broken down as follows:

Contact isolation is required for infectious diseases that can be transmitted via direct contact or via contact with infectious germs and secretions, such as when noroviruses (vomiting and diarrhoea) or resistant germs like MRSA (methicillin-resistant Staphylococcus aureus) are involved.

Droplet isolation is required for diseases transmitted via respiratory secretions in the form of droplets such as influenza.

Aerogenic isolation is required for infectious diseases transmitted through the air such as pul- monary tuberculosis and varicella.

Protective isolation is required for patients at particular risk of infection (e.g. following organ transplantation, chemotherapy for cancer). The aim here is to keep the patient away from any pathogens if at all possible.

Exercise:
What forms of isolation are you familiar with from your own practical experience? Find out what happens at your Organisation in terms of when the various forms of isolation are applied and what specific hygiene measures these involve.

With all forms of isolation, correct hand disinfection is performed before and after entering the room!

The table below contains some important principles which apply to the various forms of isolation:

	Personnel	Client	Visitors
Contact isolation	▶ wear an apron for any direct contact; ▶ wear a mask in case of respiratory secretions; ▶ wear gloves in the event of direct contact or contact with contaminated materials; ▶ perform hand disinfection before leaving the room; ▶ dispose of material directly in the room and only transport it from the room in sealed containers/bags (double-bag system); ▶ dispose of or hang aprons up in the room / air lock.	▶ single room ideally, isolation area also possible ▶ instructed in hand disinfection ▶ may not leave the room or only if told they can do so ▶ door to remain closed	▶ must register with nursing personnel ▶ instructed by nursing personnel in the necessary protective measures (information sheet) ▶ instructed in hand disinfection
Droplet isolation	▶ wear masks; ▶ wear gloves in the event of direct contact or contact with contaminated materials; ▶ wear aprons in the event of direct contact; ▶ only remove used material from the room in sealed containers/bags.	▶ single room ▶ instructed in hand disinfection ▶ may not leave the room ▶ door to remain closed	▶ must register with nursing personnel ▶ instructed by nursing personnel in the necessary protective measures (information sheet) ▶ if applicable, visitors not admitted ▶ instructed in hand disinfection
Aerogenic isolation	▶ wear special FFP masks (fine filter) when entering the room; ▶ wear gloves in the event of direct contact or contact with contaminated materials; ▶ if applicable, wear aprons in the event of direct contact; ▶ only remove used material from the room in sealed containers/bags.	▶ single room ▶ instructed in hand disinfection ▶ may not leave the room ▶ door to remain closed ▶ wears an FFP mask when they need to leave the room	▶ must register with nursing personnel ▶ instructed by nursing personnel in the necessary protective measures (information sheet) ▶ if applicable, visitors not admitted ▶ instructed in hand disinfection

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	Personnel	Client	Visitors
Protective isolation (also known as reverse isolation)	▶ wear mask, gloves and apron when entering the room; ▶ instruments, materials, bedding and client laundry should be sterile; ▶ dispose of used items, laundry, waste etc. immediately and do not leave these in the room.	▶ single room ▶ may not leave the room ▶ door to remain closed	▶ must register with nursing personnel ▶ instructed by nursing personnel in the necessary protective measures (information sheet) ▶ must wear apron, possibly mask ▶ must not enter room if showing slightest sign of infectious disease (e.g. cold symptoms)

SET- B

Course Code: MNA1105

Course Name: Clinical Picture 1st

Section – A

05X01 = 05 Marks

Q.1. Full form of HAI...

a) Hospital allergy infection
b) Hospital acquired infection
c) Hospital acquired inspection
d) Hospital actual inspection

Q. 2. Oedema is known as...

a) Abnormal accumulation fluid in interstitial
b) Blood collection in cell
c) Bluish colour of skin
d) Redness of the skin

Q.3 Mycoses disease is caused by...

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

Q.4. Infection of kidney is known as...

a) Pyelonephritis
b) Cystitis
c) Pylocystitis
d) Pyelokidnetis

Q.5. Loss of appetite is known as...

a) Anorexia
b) Bulimia nervosa
c) Anorexia nervosa
d) None of above

Section – B

02X05 = 10 Marks

Q.1. Define nosocomial infection. Write down the mode of transmission and prevention of nosocomial infection.

Nosocomial infection: -

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

Mode of transmission: -

- Contact
- Air borne
- Oral route
- Parenteral route

Prevention of nosocomial infection: -

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

Q.2. Define candidiasis. Explain the symptoms of candidiasis.

Definition: Candidiasis is a fungal disease caused by Candida fungi (yeast fungi) which affect the skin and mucosa. If the mucosa is affected, the term used is **thrush**. If internal organs are affected, the term **systemic candidiasis** is used.

Symptoms:

oral thrush: whitish deposits, most of which can be wiped away, on reddened mucosa, possibly bleeding or ulcerated mucosa, pain during eating or swallowing

- oesophageal thrush: pain during swallowing
- vaginal thrush: reddened and swollen vaginal mucosa, whitish deposits that can be wiped away, considerable itchiness, burning, lots of whitish crumbly discharge from the Vagina
- thrush affecting the urethra or bladder: symptoms similar to those associated with cystitis, namely a burning during urination, itchiness, more frequent desire to urinate
- thrush affecting the respiratory tracts: coughing, sputum

Section – C

01X10 = 10 Marks

Q.1. Define allergies. Explain the causes and symptoms of allergies.

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ALLERGIES : The term allergy refers to an acquired hypersensitivity to certain substances found in the environment that would normally be harmless (allergens). Allergies are on the increase. Many people are reacting with increasing sensitivity to the environment. Same 10—15% of the population develop allergies.

Development mechanism/causes/risk factors:

Following initial contact with an allergen, the immune System forms specific antibodies against the allergen (sometimes also known as immunoglobulins). Experts call this process **sensitization**, which basically describes the task of the immune System in physiological terms.

What happens with allergies is that the immune system delivers an excessively and undesirably severe defensive reaction in the event of a further (second) contact with the allergen. As opposed to a normal reaction — production of the number of antibodies needed — the body responds with a hypersensitivity reaction, i.e. huge quantities of antibodies are produced.

A distinction is made between allergens based on how they find their way into the body.

- **Inhaled allergens:** these are inhaled with the air we breathe (eg. house dust, pollen, particular matter).
- **Contact allergens:** these involve contact (eg. 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 (eg. nuts, strawberries, milk).
- **Injected allergens:** allergens introduced to the circulation (e.g. wasp stings, blood of a different group, medicines).

Symptoms: A distinction is made between immediate-type and delayed-type allergies, with symptoms differing accordingly.

1. 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.

Anaphylactic shock is the most severe form of allergic reaction and occurs with the immediate type. Symptoms ate itchiness, feeling hot, dizziness or loss of consciousness in worst cases, falling blood pressure, tachycardia, bronchospasm or even circulatory collapse. This is without question an emergency situation calling for immediate medical attention.

2. 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: most cases involve localized skin reactions such as burning, itchiness, redness, inflammation (eczema).

Diagnosis:

- medical history including symptoms with a view to establishing the allergens involved as accurately as possible

- respiratory function tests in the event of respiratory symptoms with a view to excluding another lung disease (eg. bronchitis)

- allergy tests: these involve using various methods, based on an actual series of tests, to search for the triggering allergens. For example, very small quantities of grass pollen are inhaled under medical supervision to see whether or not these trigger the allergy.

SET- C

Course Code: MNA1106

Course Name: First aid & CPR, Palliative care

Section – A

05X01 = 05 Marks

Q.1. What is the use of code blue in the hospital?

a) In case of cardiac arrest
b) In case of fire
c) In case of baby missing
d) In case of physical assult

Q. 2. Symptoms of burn grade 2nd.

a) Redness and blister, pain
b) Redness
c) charred, brunt on bones and muscle, no pain
d) Whitish or brownish black, no pain

Q.3. Full form of the Race is:

a) Rescue, contain, extinguish, alarm
b) Rescue, alarm, contain, extinguish
c) Rescue, extinguish, alarm, contain
d) Contain, rescue, extinguish, alarm

Q.4. Cyanosis is known as.

a) Redness
b) Inflammation
c) Bluish colour of skin
d) All of above

Q.5. Full form of CPR.

a) Cardio pulmonary resuscitation
b) Cardio pulmonary respiration
c) Cardiac pulse respiration
d) Circulatory pulmonary resuscitation

Section – B

02X05 = 10 Marks

Q.1. Define palliative care. Explain the stages of grieving.

Palliative care means to improve the quality of life of patients and their families when there is a life-threatening disease. It achieves this by looking

for pain

other physical problems

psychosocial problems

spiritual problems

Stages of grieving

1. The phase of not-admit-wanting

The message of death triggers a "feeling shock". The loss is denied, *can not be* realized and the own emotions can not be perceived. The grieving person seems numb and often feels himself "as dead". The physical reactions can be all symptoms of a shock (fast pulse, sweating, nausea, motor restlessness). The phase of this condition can last from a few hours to about a week, in case of sudden death it can last longer.

2. The phase of the erupting emotions

In this phase, the mourner plunges into a very emotional chaos: anger, grief, fear, anger, pain, dejection, guilt, and so on. The emotions that mix or predominate depend heavily on the personality of the person concerned, e.g. fearful people react with fear, choleric with anger, etc.

3. The phase of searching and separating

In the loss of a loved one, we are looking for the real people (looking for places that the deceased liked; looking for traits of the deceased in other people's faces; Taking on the habits of the deceased) and on the other ways to obtain parts of the relationship (tales and stories about the deceased. An inner confrontation with the deceased takes place. This search prepares the mourners to accept a life without the deceased, but not to forget him.

4. The phase of the new self-and world reference

In the course of the previous phase, ways were found to deal with the deceased positively. It becomes a kind of "inner figure", this can be expressed by the deceased being experienced as

an inner companion or by the fact that the grieving life possibilities, which were previously bound to the common relationship, have integrated into his own life.

In all phases, difficulties may arise. If there is no support, it can quickly manifest and result in stagnation of one of the mourning process.

Each affected person mourns differently. Every kind of mourning, loud crying as well as silence, can be right for the person concerned. Only she alone can decide.

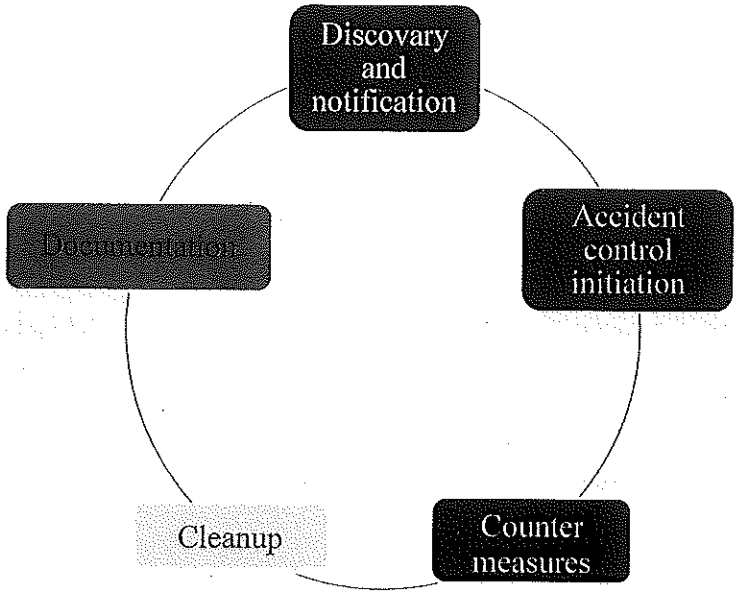
After the death of a loved one, a mourning process may be for a lifetime. Family and friends can feel very helpless.

Q.2. Define crash cart. Write down the phases and aims of emergency code.

Definition:

A cart stocked with emergency medical equipment, supplies, and drugs for use by medical personnel especially during efforts to resuscitate a patient experiencing cardiac arrest.

Phases of emergency:



Aims of emergency codes:-

- To save patient lives & eventually improve quality of hospital care & improve patient safety.
- Increase early intervention & stabilization to prevent clinical deterioration on any individual prior to the event of cardiopulmonary arrest or other life threatening health Events.
- Decrease the number of cardiopulmonary arrests that occur outside the ICU & ER department.
- Increase patient , family & staff satisfaction.
- Decrease hospital mortality rate.
- Reduce severe postoperative adverse events.

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Section – C

01X10 = 10 Marks

Q.1. Define emergency situation. Explain the three emergency situations.

An emergency is a situation that poses an immediate risk to health, life, property, or environment.

Emergency Situations:

Unconsciousness

It is a state which occurs when the ability to maintain an awareness of self and environment is lost.

Symptoms

- Confusion
- Headache
- Drowsiness
- Inability to speak or move parts of the body

Hazards

Suffocating by vomit or relapsed tongue.

Also if suspected of a back injury, carry out the unconscious position.

Dyspnoea

Difficulty in breathing; shortness of breath.

Grade of Dyspnea

Dyspnoea is divided into four different severity levels:

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

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

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

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

Symptoms

- Shortness of breathing
- Breath sound (whistling)
- Anxiety, suffocation
- Tachycardia
- Cyanosis

Cardiac arrest

when your heart suddenly stops pumping blood round your body.

Symptoms

- No respiration present
- No pulse present
- No consciousness present

Hazards

Death if untreated quickly

Note: Do not worry about the CPR to break a rib (especially with older people, this happens)! An If an automatic defibrillator is available, be sure to use it. Reanimation is more successful on average because many cardiac arrests are due to a heart rhythm disturbance and can only be remedied by defibrillation. The survival chance is reduced by 7-10% every minute in which it is not reanimated.

Circulatory shock

The blood flow of heart is low or may stop resulting less blood supply to tissue.

Symptoms

- Confusion or Lack of Alertness
- Loss of Consciousness
- Rapid Heartbeat(Tachycardia)
- Sweating
- Pale Skin
- A Weak Pulse
- Rapid Breathing
- Decreased or No Urine Output
- Cool Hands and Feet

Hazards

There is a risk of pulmonary oedema.

Acute bleeding

loss of blood from the circulatory system for any internal and external injury.

Type

Acute bleeding can be divided into two main categories:

- bleeding in injuries
- bleeding from or in the gastrointestinal tract

Symptoms

- Visible injury to the body surface
- Wounds with bleeding: venous or arterial
- Swelling, painful, localized
- In high loss, circulatory shock

Burns

A burn is damage to your body's tissues caused by heat, chemicals, electricity, sunlight, or radiation.

Symptoms

1st Grade: redness, swelling, pain, tension (similar to sunglasses)
2nd Grade: redness and blisters, pain
3th Grade: Whitish or brownish black, no pain
4th Grade: Charred, burnt on bones and muscles, no pain

Hazards

- Depending on the grade or location, a life threatening situation also arise.
- Risk of infection also arise because of natural skin barrier is missing.
- Dangerous is the use of ice or ice water on the fire place.

Note: The pain is tremendously strong in Grade 1 and above all in Grade 2 burns.

Write down important emergency numbers: **112**

Epilepsy

Epilepsy is a spectrum condition with a wide range of seizure types and control varying from person-to-person.

Symptoms

- Loss of consciousness
- Fall down
- Cramping with respiratory rest
- Twisting of arms and legs
- Possibly saliva or loss of urine

Hazards

- Violation of person during it.
- Oxygen deficiency.

SET- D

Course Code: MNA1108

Course Name: Support the Patient in Breathing

Section – A

05X01 = 05 Marks

Q.1. Normal breath in newborn baby is:

a) 40-50 breath per minute
b) 25-30 breath per minute
c) 30-35 breath per minute
d) 35-45 breath per minute

Q. 2. Dyspnea is known as.

a) Increase the breathing
b) normal breath
c) Shortness of breathing
d) Increase the pulse rate

Q.3 Tuberculosis is caused by:

a) Mycobacterium tetani
b) Mycobacterium tuberculosis
c) Streptococcus bacteria
d) Salmonella typhi

Q.4. Maximum duration during the suction procedure is:

a) 10 Second
b) 15 Second
c) 25 Second
d) 12 Second

Q.5. According to priorities which position is used in pneumonia prophylaxis?

a) Prone position
b) Side lying position
c) VATI Position
d) Sitting position

Section – B

02X05 = 10 Marks

Q.1. Define breathing. Explain the factors influencing 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.

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, Temperature, Humidity

Socio-cultural factors

(Eg, physical activity, breathing), workplace (cellar, mine, well ventilated rooms), habits (time to do sports, singing hours)

Q.2. Define pneumonia. Explain the pneumonia prophylaxis measures.

Definition: Pneumonia is a mostly acute infection of the lung tissue. And pneumonia is an inflammation of the parenchyma pf the lung is known as pneumonia.

Pneumonia prophylaxis involves preventative measures to prevent the onset of pneumonia. Pneumonia prophylaxis must be performed early and continuously. It is included in the individual care and is integrated into the daily routine. With appropriate information and education the affected persons are motivated to help. All prophylactic measures are documented in the care documentation and are thus demonstrable.

The taking of prophylactic measures involves the following steps:

- Realizing Risks
- Assess the hazard
- Plan measures
- Perform measures
- Evaluate the result of the measures

Realizing Risks

Patients are particularly vulnerable to pneumonia

- with insufficient lung ventilation (eg, pain-induced breathing, reduced general condition, bed rest),
- with increased accumulation of secretion in the respiratory tract (eg bronchitis, severe smokers or smokers),
- with descending infections (eg oral thrush, deficient oral hygiene),
- that aspirate (eg, humans after apoplexy)

Assessment of Hazards

Pneumatic scales are used to assess the risk of pneumonia. The assessment is carried out by a qualified staff member.

Planning Measures

The measures are planned individually according to the risk of pneumonia and the resources of the patient. These measures include:

- For people with insufficient lung ventilation: early mobilization, respiratory stimulation, breathing support, respiratory training / respiratory gymnastics.
- Patients with increased secretion collection: retraction, wrapping, inhalation, high fluid intake (mucolytic teas), cough assistance, drainage.
- For people with descending infections: oral and nasal care, mucosal examination.
- Patients with aspiration hazard: Aspiration prophylaxis.

Execute Measures

The implementation of the individual measures has already been described. As always, precise documentation is part of the process.

Evaluation of the Results

In order to evaluate the success or failure of the selected measures, it is important to assess the risk once again by means of a breathing scale and to plan further measures accordingly. This step is usually carried out by a qualified nurse.

Section – C

01X10 = 10 Marks

Q.1. Explain Chronic Obstructive Pulmonary Disease. Write down the four complications occur during oxyger administration.

Chronic Obstructive Pulmonary Diseases, COPD

Definition: Chronic obstructive pulmonary disease (COPD) is a chronic inflammatory lung disease that causes obstructed airflow from the lungs.

Chronic obstructive pulmonary diseases include:

- Chronic-obstructive bronchitis
- bronchial asthma
- Pulmonary emphysema

COPD is often referred to as "smoking lung".

Diagnosis

- Anamnesis
- Auscultation: The diagnosis can usually be made using the clinical picture.
- Pulmonary function test
- ABG (measuring O2 and CO2 content in the arterial blood)
- Thoracic X-ray
- Electrocardiogram

Causes

- Long-term smoking / passive smoking
- inhalation of pollutants
- Occupational exposure
- Air pollution
- Chronical Bronchitis

Symptoms

Sputum: The sputum is usually tenacious and whitish.

Cough in the morning is often referred to as "smoking cough".

Respiratory distress; The oxygen intake is disturbed, at the beginning of the disease occurs

Dyspnoea: dyspnoea, later also Dyspnoea at rest

Therapy

- The most important therapy is the smoke stop.
- Medicines do not cure the COPD but can alleviate the symptoms. Bronchial dilating drugs, so-called bronchospasmolytics.

Complication of oxygen administration

- Oxygen induced hypoventilation
- Oxygen toxicity / O_2 narcosis
- Absorption atelectasis
- Retinopathy
- Drying of mucus membranes
- Infection

Fire hazards

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of Healthcare and paramedics

Session: 2018-19 (Summer Semester)

Diploma Semester,

End-Sem. Examination

Time: 45*4 Minutes

Max. Marks: 25*4

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 05 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 10 marks

SET-A

Course Code: MNA1103
Course Name: Body mechanics, positioning

Section – A

05X01 = 05 Marks

Q.1. Which part of the body is affected by Gout disease.

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

Q. 2. 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.3 Kinesthetic is known as.

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

Q.4. Mobility is known as.

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

Q.5. Rheumatoid arthritis is known as...

a) Inflammation of the bone
b) Inflammation of joint
c) Both a and b
d) Inflammation of the limb

Section – B

02X05 = 10 Marks

Q.1. Define kinesthetic. Explain the concept of kinesthetic.

Q.2. Define Gout. Write down the four causes, symptoms and preventions of gout.

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Section – C

01X10 = 10 Marks

Q.1. Explain the degenerative joint disease. Write down the influencing factor of movements.

SET- B

Course Code: MNA1107

Course Name: Drug Education & Vital Sign

Section – A

05X01 = 05 Marks

Q.1. Normal pulse in newborn is...

a) 140 beat/minute
b) 130 beat/minute
c) 155 beat/minute
c) 120 beat/minute

Q. 2. Which medicine is used for pain killing?

a) Antidepressive
b) Analgesic
c) Antiemetic
d) Antiseptic

Q.3 Which route is used to measure body temperature in mental patient?

a) By oral
b) By axilla
c) By axilla or oral
d) By axilla or rectum

Q.4. Full form of ECG is:

a) Electro cardio graphy
b) Electro cardio gram
c) Electricity cardio graphy
d) None of above

Q.5. Tachycardia is known as...

a) Increase the BP
b) Increase the Heart rate
c) Increase germ
d) None of above

Section – B

02X05 = 10 Marks

Q.1. Define angina pectoris. Write down the four causes or symptoms of angina pectoris.

Q.2. Define pulse. Explain 6R' rules of administration of drugs.

Section – C

01X10 = 10 Marks

Q.1. Define heart failure. Describe the symptoms or care measures of heart failure.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

SET- C

Course Code: MNA1109

Course Name: Assisting in Medical Procedures

Section – A

05X01 = 05 Marks

Q.1. How much temperature is required in autoclave machine during sterilization?

a) 122^{0}C
b) 121^{0}C
c) 123^{0}C
d) 125^{0}C

Q. 2. What is meant by Aphasia?

a) Speech disorder
b) Eating disorder
c) Sleep disorder
d) Paralysis

Q.3 Indwelling catheterization is known as...

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

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

a) 100 – 101^{0}F
b) 90 – 95^{0}F
c) 105 – 110^{0}F
d) 80 -85^{0}F

Section – B

02X05 = 10 Marks

Q.1. Define Enema. Write down the types of enema.

Q.2. Define sterilization. Explain the cleaning, sterilization and disinfection.

Section – C

01X10 = 10 Marks

Q.1. Define bed sore. Explain the causes, stages and care measure of bed sores.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

SET- D

Course Code: MNA1110

Course Name: Clinical Picture 2nd

Section – A

05X01 = 05 Marks

Q.1. Full form of HIV.

a) Human immunodeficiency virus
b) Human immunity virus
c) Hormone immunodeficiency virus
d) Hormone immunity virus

Q. 2. Hyperglycemia is known as.

a) Increase the level of blood cell
b) Increase the level of blood sugar
c) Increase the level of blood protein
d) Increase the pulse rate

Q.3 Hepatitis A is transmitted by:

a) By feco-oral route
b) By parenteral route
c) By hand shake
d) All of above

Q.4.Dengue fever is caused by:

a) Plasmodium malaria
b) Aedes mosquito
c) Plasmodium vivex
d) All of above

Q.5. Which color of stool is found in the typhoid patient?

a) Bloody color
b) Pee color
c) Musty color
d) Dark coca color

Section – B

02X05 = 10 Marks

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

Q.2. Explain Dengue.

Section – C

01X10 = 10 Marks

Q.1. Define hepatitis. Explain the symptoms, types and preventions of hepatitis.

BHARTIYA SKILL DEVELOPMENT UNIVERSITY

Registration No.: .....

School of Healthcare and paramedics

Session: 2018-19 (Summer Semester)

Diploma Semester,

End-Sem. Examination

Time: 45*4 Minutes

Max. Marks: 25*4

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 05 marks
3. **SECTION-C:** Answer all questions from section C. Each question carries 10 marks

SET-A

Course Code: MNA1103
Course Name: Body mechanics, positioning

Section – A

05X01 = 05 Marks

Q.1. Which part of the body is affected by Gout disease.

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

Q. 2. 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
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Q.3 Kinesthetic is known as.

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

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d) Both b and c

Q.5. Rheumatoid arthritis is known as...

a) Inflammation of the bone
b) Inflammation of joint
c) Both a and b
d) Inflammation of the limb

Section – B

02X05 = 10 Marks

Q.1. Define kinesthetic. Explain the concept of kinesthetic.

Kinaesthetics — what is it? The concept of kinaesthetics was established by **Americans Lenny Marietta and Frank Hatch.**

The term is derived from the Greek **kinesis** (= movement) and **aesthesis** (= sensitivity). Kinaesthetics refers to the **study of the perception of movement**. It is concerned with contact and perception.

Kinaesthetics favors natural, original and harmonious sequences of movements and promotes health and independence.

Concept of kinesthetic:

1. Interaction
2. Functional anatomy
3. Human movement
4. Effort
5. Human action
6. Environment

Q.2. Define Gout. Write down the four causes, symptoms and preventions of gout.

Definition 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)

Symptoms

Uric acid is a catabolic product produced in every cell through the degradation of purines (part of our genetic material). Purines can also, however, be ingested in food.

They can be found in many foods of animal and plant origin. Uric acid is normally excreted by the kidneys and intestine without any problems. Hyperuricemia will occur if the balance between the formation and excretion of uric acid is disturbed. Once the uric acid in the blood exceeds a certain concentration and crystals of uric acid start to form, these are then deposited in the joint capsules, where acute symptoms develop.

The MTP joint of the big toe is affected in most cases, and the ankle more rarely. Basically, however, gout can occur in any joint. The affected joint is severely swollen, red and extremely painful. The patient may also have a fever. Typically, an attack of gout will occur during the night, mainly triggered after a lavish dinner at by alcohol, cold or extreme fasting. the person affected also feels pain without moving and cannot even bear their bed covers touching the affected joint.

Prevention: - Maintain a describle body weight

- Drink plenty of fluid
- Limit or avoid alcohol
- Limit your intake of meat, fish and poultry
- Get your protein from low fat dairy products

Section – C

01X10 = 10 Marks

Q.1. Explain the degenerative joint disease. Write down the influencing factor of movements.

Definition

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

Diagnosis

Anamnesis Physical examination (typical symptoms)X-rays (opportunity to visualize the condition of the joint, other causes such as tumors can be ruled out)Laboratory tests and possibly arthrocentesis (other causes such as gout can be ruled out) Possibly sonography, scintigraphy, computed tomography and magnetic resonance tomography.

Causes/risk factors

The causes of primary arthrosis are unknown.

Secondary arthrosis is caused by an un physiological burden (i.e. an incorrect or excessive bad) on a joint.

Risk factors are as follows:

- excess weight
- excessive strain during sport
- skeletal malformations, eg. knock knees, congenital hip dysplasia
- badly healed fractures
- loads endured at work (eg. builders).

Symptoms

Patients will often have been symptom-free for quite a long time. In most cases, the following symptoms will emerge at some later stage:

- feeling stiff around the affected joint, particularly in the morning, joints feeling a bit 'rusty
- pain: onset-type pain at first (pain when stress begins), followed by stress-related pain proper pain as stress continues) and later pain at rest (background pain)
- mobility restrictions with misalignment of joints (deformation)
- muscular tension and muscular contraction

- rubbing noises
- active arthrosis may be associated with acute inflammation, significant swelling and overheating of the joint and also considerable pain following, for example, some form of excessive strain.

Treatment

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

- weight loss for obese patients
- local applications of heat or cold depending on the patient 's condition
- medication to build up cartilage, e.g. glucosamine and chondroitin sulphate
- pain - relief medication (non-steroidal antiphlogistics and anti-inflammatories)
- 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 really beneficial from a pain relief and mobility perspective.

SET- B

Course Code: MNA1107

Course Name: Drug Education & Vital Sign

Section – A

05X01 = 05 Marks

Q.1. Normal pulse in newborn is...

a) 140 beat/minute
b) 130 beat/minute
c) 155 beat/minute
c) 120 beat/minute

Q. 2. Which medicine is used for pain killing?

a) Antidepressive
b) Analgesic
c) Antiemetic
d) Antiseptic

Q.3 Which route is used to measure body temperature in mental patient?

a) By oral
b) By axilla
c) By axilla or oral
d) By axilla or rectum

Q.4. Full form of ECG is:

a) Electro cardio graphy
b) Electro cardio gram
c) Electricity cardio graphy
d) None of above

Q.5. Tachycardia is known as...

a) Increase the BP
b) Increase the Heart rate
c) Increase germ
d) None of above

Section – B

02X05 = 10 Marks

Q.1. Define angina pectoris. Write down the four causes or symptoms of angina pectoris.

Definition

Angina is a type of chest pain that results from reduced blood flow to the heart. A lack of blood flow means your heart muscle isn't getting enough oxygen. The pain is often triggered by physical activity or emotional stress.

Causes

- Arteriosclerosis
- Thrombosis
- Embolism
- Cramp-like constriction of the coronary vessels

Symptoms

- Tightness
- Severe pain behind the sternum
- Shortness of breath
- Nausea
- Fatigue
- Dizziness
- Profuse sweating
- Anxiety

Q.2. Define pulse. Explain 6R' rules of administration of drugs.

Pulse. Pulse rate is the number of heart beats per minute. The resting pulse rate for an average adult is between 60 and 80 beats per minute.

your pulse is your heart rate, or the number of times your heart beats in one minute. heart rates vary from person to person

6R rules

1 Right Patient: Check the name on the documentation with the name on the dispenser.

2. Right drug: Comparison of the drug name in the documentation with the drug name on the package.

3 Right dosage: Comparison of the dosage on the medication pack with the prescribed dosage.

4 Right method : Comparison of the prescribed from of application with the application from recorded on the drug pack

5 Right time : Comparision of the prescribed time with the appropriate indentation in the dispenser.

6 Right Documentation

Section – C

01X10 = 10 Marks

Q.1. Define heart failure. Describe the symptoms or care measures of heart failure.

Definition

The heart muscle is unable to pump enough blood through the body to meet the body's need for blood and oxygen.

Heart failure is divided three part :-

- Left heart failure
- Right heart failure
- Global insufficiency

Symptoms	• Sweating • Decrease systolic blood pressure • Dyspnoea • Cyanosis and tachycardia appear • Blood stained sputum • Fatigue • Weakness • Lethargy • Weight gain • Increase abdominal girth • Anorexia • Right upper quadrant pain • Elevated neck vein

Care measures for patients with Heart failure

The patients feel only a few restrictions at the beginning of their illness, but they can quickly intensify. With increasing worsening of cardiac insufficiency, the restrictions in everyday life also increase. This conversion is not easy to cope with. Therefore, it is important that you as a health professional provide the necessary psychological support to the patient.

The following points are of central importance in the care of patients with heart failure:

- Monitoring of breathing
- Blood pressure and pulse control
- Control of the fluid (see also weight control and fluid balance)
- Supervision of the consciousness
- Support in everyday life depending on the extent of the disease (eg in the case of body care)
- Well digestible diet, rather calorie-reduced diet
- Carry out an antipathy prophylaxis
- Information about the medication and its regular intake
- Adaptation of the home environment to the current disease situation (eg to put hold handles or organize walking aids)
- organization of other services for home (eg meal service, household help)

SET- C

Course Code: MNA1109

Course Name: Assisting in Medical Procedures

Section – A

05X01 = 05 Marks

Q.1. How much temperature is required in autoclave machine during sterilization?

a) 122^{0}C
b) 121^{0}C
c) 123^{0}C
d) 125^{0}C

Q. 2. What is meant by Aphasia?

a) Speech disorder
b) Eating disorder
c) Sleep disorder
d) Paralysis

Q.3 Indwelling catheterization is known as...

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

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

a) 100 – 101^{0}F
b) 90 – 95^{0}F

c) 105 – 110^{0}F

d) 80 -85^{0}F

Section – B

02X05 = 10 Marks

Q.1. Define Enema. Write down the types of enema.

Definition: - introduction of solution in to the large intestine for removing feces and cleansing the bowel.

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

Q.2. Define sterilization. Explain the cleaning, sterilization and disinfection.

Definition :

The procedure of destroying all microorganism in or a given environment, such as a surgical instrument in order to prevent the spread of infection. This is usually done by using heat, radiation or chemical agents.

Cleaning:

The physical removal of organic material or soil from object is usually done by using water with or without detergents.

Disinfection:

It means the destruction or removal and killing all pathogenic organism or organism capable of giving rise of infection. Disinfects are compounds that kill micro-organism and may or may not kill spores, but are not safe to apply to tissue.

Sterilization:

Sterilization is the destruction of all forms of microbial life; it is carried out in the hospital with steam under pressure, liquid or gaseous chemicals, or dry heat.

Types of sterilizaton:

The Methods of Sterilization include

1. Heat methods.
2. Chemical sterilization.
Filtration method

Heat method of sterilization:

This is the most common method of sterilization. The heat used kills the microbes in the substance. The temperature of the heat and duration of heating are the factors that affect the extent of sterilization.
In heat sterilization process, the longer the exposure to heat the better is the sterilization at a given temperature. As the temperature of heat raises the timespan required for sterilization decreases.
Further, the sterilization time increases with a decrease in temperature and vice-versa. But one needs to maintain minimum sterilization time or minimum contact time for the heat to be in touch with microbes or bacteria and thereby kill them.
The heat method of sterilization is again of two types based on the type of heat used.

Moist heat method of sterilization: Here heat is applied in the form of steam or just boiling. This method includes techniques like

- Boiling.
- Pasteurization.
- By use of steam (Autoclave).

Boiling is preferred for metallic devices like surgical scissors, scalpels, needles, etc. Here substances are boiled to sterilize them.
Using Steam (autoclaving): Here the substances are subjected to sterilization in an autoclave a steam sterilization equipment. The process is carried out at a temperature of 115 degrees for 60 min or 121 degrees for 20 min at 15psi pressure.
The saturated steam is formed at boiling temperature of water, i.e.,100 degrees.
This steam condenses on the material and relieves the latent heat repeatedly to convert back into the water.
Further, the saturated steam under pressure penetrates all the narrow spaces leaving no microbes alive thereby making the sterilization very efficient.
It is the most common method used for drugs as it is powerful enough even to kill bacterial spores.
Bacterial spores are the forms of bacteria which are inert. They form a rigid cover over the cell wall during harsh climate. This cover prevents any damage to cell and drying of the cell. By steam sterilization, these forms of bacteria are also killed as steam destroys the cell wall.

Dry heat methods: Here the substances are subjected to dry heat like:

- Flaming
- Incineration
- Hot air oven.
- Radiation sterilization

Flaming is the process of exposing metallic device like the needle, scalpels, scissors to flame for few minutes. The fire burns the microbes and other dust on the instrument directly.
Incineration is done especially for inoculating loops used in microbe cultures. The metallic end of the loop is heated to red hot on the flame. This exposure kills all the germs.
Hot air oven is suitable for dry material like powders, metal devices, glassware, etc.
Here thermostable materials on the racks inside the hot air oven.
Then in the closed oven, hot air is circulated at particular temperature and time.
Radiation method involves exposing the packed materials to radiation for sterilization. There are two types of radiations available for sterilization i.e. non-ionic and ionic radiation.

- **Non-ionic radiations** are safe to the operator of sterilization, and they are like Ultra Violet radiations, they can be used even at the door entrances to prevent entry of live microbes through the air.
- **Ionizing radiation sterilization.** They are powerful radiation and very useful for sterilization. The operator needs to protect himself from exposure from these radiations by use of special clothing. Ex: X-rays, γ-rays, etc.

Chemical method of sterilization: Here the articles are subjected to sterilization by using toxic gasses. The gas penetrates quickly into the material like steam so, the sterilization is effective. But the chances of explosion and cost factors are to be considered.

The gasses used for sterilization are very poisonous. The commonly used gas is ethylene oxide with a combination of carbon-dioxide. Carbon dioxide is added to minimize the chances of an explosion.

Filtration: Here the liquids are filtered through bacterial filters to remove any microbes present. This method is very effective for sterilization of heat sensitive liquids. The chances of clogging and long-time duration for the process to happen are drawbacks.

Section – C

01X10 = 10 Marks

Q.1. Define bed sore. Explain the causes, stages and care measure of bed sores.

Definition: A bedsore is a pressure ulcer caused by a reduced blood flow through the skin due to prolonged pressure.

Causes and risk factors

1. Circulation pressure: It hinders the circulation of the skin capillaries. The skin and the down-lying tissue are no longer perfused. An ischemia develops.

2. Pressure duration: If the ischemia is less than two hours, the cells can recover. If the pressure persists longer, the cells die. A necrosis develops.

3. Risk Factors: The time to occurrence of irreversible damage may be less than two hours if the following risk factors are present:

- Immobility, e.g. in hemiplegia, paralysis
- Sensory disturbances e.g. in multiple sclerosis, patients in coma, diabetes mellitus.
- Reduced general and nutritional condition e.g. malignant tumour, infections, deficiency symptom.
- Metabolic disorders, e.g. diabetes mellitus
- Obesity: The patients are sweating more and the pressure is greater.
- Underweight and deformities: Subcutaneous tissue is missing between the skin and bones.
- Shear forces: When pushing in the bed, this increases the pressure.
- Fever: increased sweating
- Friction

Stage 1	Redness
Stage 2	Blistering
Stage 3	necrosis

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Stage 4	Ulcer formation
Stage 4a	Superficial defect to the muscles
Stage 4b	Deep defect into the muscles
Stage 4c	Deep defect to bone/joint structure, possibly bone involvement

Measures for decubitus prophylaxis:

The most important measure for decubitus prophylaxis is pressure relief. It is achieved by:

- Mobilization
- Regular transfer (every 1-2 hours)
- Micro positions, including positional changes by small pads or cushions
- Anti-decubitus mattresses (various systems)
- Skin care with ph-neutral cleansing agents.
- Clean, wrinkle-free laundry (no crumbs) and absorbent pads
- Avoid moisture (incontinence care, change sweating during heavy sweating).
- Light massage (lotion: wassa-mossa) to increase the blood circulation as well as to prevent bed sore.
- Nutrition such as protein.

SET- D

Course Code: MNA1110

Course Name: Clinical Picture 2nd

Section – A

05X01 = 05 Marks

Q.1. Full form of HIV.

a) Human immunodeficiency virus
b) Human immunity virus
c) Hormone immunodeficiency virus
d) Hormone immunity virus

Q. 2. Hyperglycemia is known as.

a) Increase the level of blood cell
b) Increase the level of blood sugar
c) Increase the level of blood protein
d) Increase the pulse rate

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a) By feco-oral route
b) By parenteral route
c) By hand shake
d) All of above

Q.4.Dengue fever is caused by:

a) Plasmodium malaria
b) Aedes mosquito
c) Plasmodium vivex
d) All of above

Q.5. Which color of stool is found in the typhoid patient?

a) Bloody color
b) Pee color
c) Musty color
d) Dark coca color

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Section – B

02X05 = 10 Marks

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

Epilepsy: - *Epilepsy* is a central nervous system (neurological) disorder in which brain activity becomes abnormal, causing seizures or periods of unusual behavior, sensations, and sometimes loss of awareness.

Types of epilepsy: -

1. **Partial seizure: -**
   A partial seizure means the epileptic activity took place in just part of the patient's brain. There are two types of partial seizure:

a. **Simple partial seizure –**
   The patient is conscious during the seizure. In most cases, the patient is also aware of their surroundings, even though the seizure is in progress.

b. **Complex partial seizure –**
   The patient's consciousness is impaired. The patient will generally not remember the seizure, and if they do, their memory will be vague.

2. Generalized seizure: -
   A generalized seizure occurs when both halves of the brain have epileptic activity. The patient's consciousness is lost while the seizure is in progress.

a. Tonic-clonic seizures (previously known as grand mal seizures)-
   Perhaps the best known type of generalized seizure. They cause a loss of consciousness, body stiffness, and shaking.

b. Absence seizures- Previously called petit mal seizures, these involve short lapses in consciousness where the individual appears to be staring off into space. Absence seizures often respond well to treatment

c. Tonic seizures-
   Muscles become stiff, and the person may fall.

d. **Atonic seizures-**
   A loss of muscle control causes the individual to drop suddenly.

e. **Clonic seizures-**
   This is associated with rhythmic, jerking movements.

Q.2. Explain Dengue.

Dengue:

Dengue fever is transmitted by the bite of an Aedes mosquito infected with a dengue virus.
It can't be spread directly from one person to another parson.

Symptoms of Dengue Fever

Symptoms usually begin four to six days after infection and last for up to 10 days, may include

- Sudden, high fever
- Severe headaches
- Pain behind the eyes
- Severe joint and muscle pain
- Fatigue
- Nausea

- Vomiting
- Skin rash, which appears two to five days after the onset of fever
- Mild bleeding (such a nose bleed, bleeding gums, or easy bruising)

Diagnosing Dengue Fever

- Doctors can diagnose dengue infection with a blood test to check for the virus or antibodies to it.
- PCR TEST
- ELISA TEST
- PRNT (Plaque reduction neutralization test) TEST

Treatment for Dengue Fever

There is no specific medicine to treat dengue infection. If you may have dengue fever, you should use pain relievers with acetaminophen and avoid medicines with aspirin. You should also rest, drink plenty of fluids, and see your doctor. If you start to feel worse in the first 24 hours after your fever goes down, you should get to a hospital immediately to be checked for complications.

Preventing Dengue Fever

There is no vaccine to prevent dengue fever. The best way to prevent the disease is to prevent bites by infected mosquitoes. This involves protecting yourself and making efforts to keep the mosquito population down.

To protect yourself:

- Stay away from heavily populated residential areas, if possible.
- Use mosquito repellents, even indoors.
- When outdoors, wear long-sleeved shirts and long pants tucked into socks.
- When indoors, use air conditioning if available.
- Make sure window and door screens are secure and free of holes.
- If sleeping areas are not screened or air conditioned, use mosquito nets.
- If you have symptoms of dengue, speak to your doctor.

Section – C

01X10 = 10 Marks

Q.1. Define hepatitis. Explain the symptoms, types and preventions of hepatitis.

Hepatitis: -

Hepatitis is inflammatory condition of the liver.

The 5 types of viral hepatitis

Viral infections of the liver that are classified as hepatitis include hepatitis A, B, C, D, and E.

Hepatitis A

Hepatitis A is caused by an infection with the hepatitis A virus (HAV). This type of hepatitis is most commonly transmitted by consuming food or water contaminated by feces from a person infected with hepatitis A.

Hepatitis B

It is transmitted through contact with infectious body fluids, such as blood, vaginal secretions, or semen, containing the hepatitis B virus (HBV). Injection drug use, having sex with an infected partner, or sharing razors with an infected person increase your risk of getting hepatitis B.

Hepatitis C

Hepatitis C comes from the hepatitis C virus (HCV). Hepatitis C is transmitted through direct contact with infected body fluids, typically through injection drug use and sexual contact. HCV is among the most common blood borne viral infections in community.

Hepatitis D

Hepatitis D is a serious liver disease caused by the hepatitis D virus (HDV). HDV is contracted through direct contact with infected blood. Hepatitis D is a rare form of hepatitis that only occurs in conjunction with hepatitis B infection. The hepatitis D virus can't multiply without the presence of hepatitis B. Also called delta hepatitis,

Hepatitis E

Hepatitis E is a waterborne disease caused by the hepatitis E virus (HEV). Hepatitis E is mainly found in areas with poor sanitation and typically results from ingesting fecal matter that contaminates the water supply.

Prevent Hepatitis:

Hygiene

Practicing good hygiene is one key way to avoid contracting hepatitis A and E

- local water
- ice
- raw or undercooked shellfish and oysters
- raw fruit and vegetables

Hepatitis B, C, and D contracted through contaminated blood can be prevented by:

- not sharing drug needles
- not sharing razors
- not using someone else's toothbrush
- not touching spilled blood

Hepatitis B and C can also be contracted through sexual intercourse and intimate sexual contact. Practicing safe sex by using condoms and dental dams can help decrease the risk of infection.

Common symptoms of hepatitis

If you have infectious forms of hepatitis that are chronic, like hepatitis B and C, you may not have symptoms in the beginning. Symptoms may not occur until the damage affects liver function.

Signs and symptoms of acute hepatitis appear quickly. They include:

- fatigue
- flu-like symptoms
- dark urine
- pale stool
- abdominal pain
- loss of appetite
- unexplained weight loss
- yellow skin and eyes, which may be signs of jaundice

Chronic hepatitis develops slowly,