



মহাশিক্ষা বিভাগ (সংস্কৃত)
DEPARTMENT OF EDUCATION (S)

Government of Manipur

CHAPTER 15 HUMAN DISEASES

SOLUTIONS

TEXTUAL QUESTIONS & ANSWERS

1. What is health?

Ans: According to WHO, **health** is a state of complete physical, mental and social well-being.

2. What is a disease? What are its causes?

Ans: A **disease** is an abnormal condition of an organism that impairs bodily functions.

The important **causes of diseases** are genetic defects, nutritional deficiencies, toxic chemicals and infectious micro-organisms etc.

3. Define a symptom. Give two points of differences between symptom and a sign of a disease.

Ans: A **symptom** is a sensation or change in body functions experienced by a patient or any feature which is noticed by the patient. **e.g.** fatigue or tiredness, pain, nausea etc.

The **differences** between Symptoms and Sign are given in the table below:

SYMPTOM	SIGN
(a) A Symptom is a change in the body function which is experienced by the patient. E.g. fatigue, pain, nausea etc.	(a) A Sign is the evidence of the presence of a disease or disorder. Examples are elevated blood pressure, abnormal appearance of retina etc.
(b) It may be a physical condition indicating a particular illness or disorder.	(b) A sign is noticed by the doctors or others (distinct sign for different diseases). RBC count is a sign.

4. Define diarrhoea. What are the signs of diarrhoea?

Ans: **Diarrhoea** is a common disease characterized by an increased frequency of bowel movement and passing out watery stool.

The signs of diarrhoea include:

- (a) Moderate or severe abdominal pain or tenderness, moderate or severe dehydration.
- (b) Prolonged vomiting that prevents intake of fluids orally and high fever.



5. What is viral gastroenteritis? What are its symptoms?

Ans: Gastroenteritis is the viral infection of the stomach and small intestine, commonly caused by **calciviruses**.

Symptoms of viral gastroenteritis are nausea, vomiting, abdominal cramps and diarrhoea that typically last only 48-72 hours.

6. Name the organisms which have caused the following diseases:

Traveller's diarrhoea, food Poisoning and enterocolitis

Ans:

(a) **Traveller's diarrhoea** is caused by *Escherichia coli*.

(b) **Food poisoning** is caused by *Staphylococcus aureus* and *Clostridium perfringens*.

(c) **Enterocolitis** is caused by *Camphylobacter jejuni*, *Shigella*, *Salmonella* and pathogenic strain of *E. coli*.

7. What is dehydration? When does it occur?

Ans: The excessive loss of body fluids and electrolytes is known as **dehydration**. It occurs due to diarrhoea.

8. What are the conditions when a doctor should be consulted to treat a diarrhoea patient?

Ans: The conditions are high fever, abdominal pain, bloody diarrhoea, moderate or severe dehydration and acute diarrhoea in infants or young children.

9. Which organism causes typhoid or enteric fever? What are its symptoms?

Ans: Typhoid fever is caused by infection with *Salmonella typhi*.

The symptoms of Typhoid are:

(a) Continuous fever as high as 40°C .

(b) Rosy spots on the lower chest and abdomen.

(c) Slow heartbeat.

(d) Bleeding from nostrils.

(e) Delirium with headache and cough.

(f) Abdominal pain, gastroenteritis, diarrhoea and dehydration.

10. What are the preventive measures for typhoid or enteric fever?

Ans: The preventive measures for typhoid or enteric fever are:

(a) Vaccination.

(b) Use of disinfected or boiled water for drinking.

(c) Proper community sanitation.

(d) Avoid contaminated raw food.



11. What is Malaria? What are its symptoms? Give the name of organisms causing malaria? Which organism spreads the disease?

Ans: Malaria is an infectious disease caused by the **protozoan parasite** of the genus *Plasmodium*.

Symptoms of Malaria include fever, shivering, arthralgia, vomiting, anaemia, haemoglobinuria, convulsions.

The classical symptom of malaria is cyclical occurrence of sudden coldness followed by rigor and fever and sweating lasting for 4-6 hrs. The disease is spread by **female Anopheles** mosquito.

12. Which malarial parasites cause severe and chronic malaria?

Ans: *Plasmodium falciparum* and *Plasmodium vivax* cause severe malaria while *Plasmodium vivax* and *Plasmodium ovale* cause chronic malaria.

13. What is tuberculosis? Which organism causes the disease? What are the symptoms of tuberculosis?

Ans: Tuberculosis is a common and deadly infectious disease caused by *Mycobacterium tuberculosis*.

Symptoms of TB include chest pain, Coughing up blood, Productive & prolonged cough for more than three weeks, fever, chills, night sweats, appetite loss, weight loss, pale complexion and often a tendency to fatigue very easily.

14. How is tuberculosis transmitted from one person to another? How can we protect ourselves against infection with Tuberculosis?

Ans: Tuberculosis can be transmitted from infected individuals to the healthy one in the following ways:

Mode of Transmission: Infectious minute aerosol droplets release during cough, sneezes, kiss or spit.

Protection: Avoid prolonged, frequent cold intense contact with infected one, children are vaccinated (BCG vaccine); however there is no reliable vaccine for protection to adults.

15. What is Hepatitis? What are the common causes of hepatitis? What are the symptoms of acute hepatitis?

Ans: Hepatitis is a disease which is characterized by injury to liver.

The common causes of hepatitis are: infection with hepatitis viruses, due to toxins (notably alcohol), other infections or auto immune processes.



Symptoms of acute hepatitis:

- (a) Flu like symptoms along with malaise, muscle and joint aches, fever, vomiting, diarrhoea and headache.
- (b) Profound loss of appetite.
- (c) Dark urine, jaundice.
- (d) Abdominal discomfort.

16. Write briefly on (i) Hepatitis A (ii) Hepatitis B (iii) Hepatitis C.

Ans:

- (i) **Hepatitis A:** It is an acute infectious disease (affecting children and young adults), caused by a **picornavirus**; and causes acute form of hepatitis. It can be spread through personal contact, consumption of raw contaminated food or water. A vaccine is available for prevention of the disease; patients are advised to rest, drink adequate water and avoid alcohol.
- (ii) **Hepatitis B:** It is caused by a **hepadnavirus** that causes both acute and chronic hepatitis. The mode of transmission includes blood transfusion, tattoos, sexual contact, and contact with blood or bodily fluids, from mother to child by breast feeding. The infection results in cirrhosis, liver cancer. A vaccine is available that will prevent from Hepatitis B infection.
- (iii) **Hepatitis C:** It is caused by a **flavivirus** and may be caused chronic hepatitis leading to cirrhosis.

It can be transmitted through contact with blood and can also cross the placenta.

17. Write what you know about alcoholic Hepatitis.

Ans: **Alcohol** is a significant cause of hepatitis. Usually, **alcoholic hepatitis** comes after a period of increased alcohol consumption and is characterized by various symptoms including feeling unwell, enlargement of liver, development of fluid in the abdomen, and modest elevation of liver blood test. It can vary from mild to severe inflammation of liver, even liver failure. Alcoholic hepatitis by itself does not lead cirrhosis.

18. Write what do you know about HIV/AIDS?

Ans: **AIDS** is a condition in human in which the immune system begins to fail, leaving the body prone to life threatening opportunistic infections. It is caused by a retrovirus known as **HIV** which breaks down the body's immune system. AIDS refers only to the last stage of the HIV infection.



The disease can be transmitted through **unprotected sexual route, blood contact** with infected one and infected **mother to child**.

Some symptoms of HIV/AIDS are given below:

- (a) Lymph nodes may remain enlarged for more than three months.
- (b) Lack of energy, frequent fevers and sweats
- (c) Persistent skin rashes or flaky skin
- (d) Persistent or frequent yeast infections.

19. What are the ways through which a person can become infected with HIV?

Ans:

- (a) **Sexual Transmission:** HIV spread most commonly by sexual contact with an infected partner.
- (b) **Blood contact:** HIV may also be spread through contact with infected blood.
- (c) **Needles:** HIV is transmitted by sharing of needles, syringes, or drug use equipment with infected one.
- (d) **Mother to child transmission**

20. What are the initial temporary symptoms of HIV infection?

Ans: The initial temporary **symptoms of HIV** infection may include **sore throat, fever, headache, malaise and enlarged lymph nodes**.

21. What are the common symptoms that appear in an HIV infected person with weakened immunity?

Ans: The **common symptoms** that appear in an **HIV** infected person with weakened immunity are:

- (a) Lymph nodes may remain enlarged for more than three months, lack of energy and weight loss.
- (b) Frequent fevers and sweats, persistent skin rashes or flaky skin.
- (c) Persistent or frequent yeast infections, short term memory loss.
- (d) Pelvic inflammatory disease that does not respond to treatment.

22. What is Rabies? Name the organism that causes Rabies. How can we protect ourselves against Rabies infection?

Ans: **Rabies** is a viral zoonotic disease that causes acute inflammation of the brain. It is caused by infection with **lyssavirus**. In man, it is generally caused by the **bite of a rabid dog**.

We can protect ourselves against rabies infection by **vaccination of dogs and cats**.



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23. Define nutrition.

Ans: **Nutrition** is defined as the process by which organism obtain food and utilizes for various processes of life.

24. What are nutrients? What are the different types of nutrients?

Ans: The chemical substances present in our food are called **nutrients** and foods provide nutrients.

The different types of nutrients are: Carbohydrates, proteins, fats, vitamins, minerals, water.

25. What is meant by a balanced diet? Write down the approximate proportions of various nutrients in a balanced diet?

Ans: A **balanced diet** is a combination of the various essential nutrients in the proper proportions to meet the daily needs of the body.

The approximate proportions of various nutrients in a balanced diet: Carbohydrate - 40-50%; **proteins**-30-30%; **fats**-30%; **vitamins**-adequate amount; **minerals**-adequate amount; **water**-adequate amount.

26. What is malnutrition? Distinguish between undernutrition and overnutrition.

Ans: **Malnutrition** is a condition caused by improper or insufficient diet.

Undernutrition results from inadequate consumption, poor absorption or excessive loss of nutrients whereas **overnutrition** results from overeating or excessive intake of specific nutrients. Malnutrition is a condition caused by an improper and insufficient diet that covers the problems of both under undernutrition as well as overnutrition.

27. Define Protein Energy malnutrition and micronutrient malnutrition.

Ans: **Protein Energy malnutrition (PEM)** refers to inadequate availability or absorption of energy and proteins in the body. **e.g. Kwashiorkor and Marasmus**

Micronutrient malnutrition refers to the disease caused by a dietary deficiency of vitamins and minerals in our body. **e.g. scurvy and rickets** etc.



28. Differentiate between kwashiorkor and marasmus.

Ans: The **differences** are listed in the table below:

KWASHIORKAR	MARASMUS
(a) It is caused by deficiency of protein.	(a) It is caused by deficiency of protein and calories
(b) It occurs in children after 18 months of age.	(b) It occurs mostly in infants.
(c) Discolouration of skin and hair.	(c) No change in skin and hair.
(d) Oedema with swollen abdomen (pot belly).	(d) No oedema and pot belly.
(e) No loss of adipose tissue.	(e) Drastic loss of adipose tissue.

29. What is scurvy? What are its symptoms?

Ans: **Scurvy** is a deficiency disease resulting from insufficient intake of vitamin C which is required for proper collagen synthesis in humans.

The symptoms of scurvy:

- (a) Gradual weakening and muscle pain.
- (b) Dark purplish spots on tongue, Skin on legs.
- (c) Bleeding from all mucous membranes.
- (d) Opening of scars and bone fractures that had been healed many years before.
- (e) Spongy tender gums often leading to tooth loss.
- (f) Sunken eyes and pale skin.

30. What is goitre? Write down its causes and symptoms.

Ans: **Goitre** is a deficiency disease characterized by enlargement of the thyroid gland in the neck due to insufficient intake of iodine. It is seen as a prominent swelling in the neck, just below larynx or Adam's apple.

CAUSES OF GOITRE	SYMPTOMS OF GOITRE
(a) Prolonged iodine deficiency in diet.	(a) Swelling of the thyroid gland.
(b) Inflammation of the gland	(b) Diminish power of concentration.
(c) Inborn errors of thyroid hormone synthesis	(c) Feeling tired and sleeping excessively.
(d) Hyperthyroidism causing Graves Basedow disease.	(d) Slow reflexes, rapid heartbeat.
(e) Thyroid cancer.	(e) Depression, emotional upset.
	(f) Dry thickened skin and brittle hair.



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31. Write the causes of night blindness. How can we prevent night blindness?

Ans: The causes of Night Blindness are:

- (a) Deficiency of vitamin A or retinol.
- (b) Retinitis pigmentosa, a disorder in which the rod cell in the retina gradually loss their ability to respond to the light.
- (c) Cataracts, certain medications and birth defects.

It can be prevented by including vitamin A rich food in our diet (fish liver oil, butter, fortified margarine, yellow, yellowish-red and green vegetables and fruits).

32. Define Rickets. What are its causes and symptoms? Mention one preventive measure for rickets?

Ans: Rickets is the softening of the bones in the children leading to fractures and deformity.

The causes of Rickets are: Deficiency of vitamin D and lack of adequate calcium in the diet.

Symptoms of Rickets are: Dental problem, bone pain or tenderness, muscle weakness, growth disturbance, skeletal deformity, hypocalcaemia, tetany and soft skull etc.

We should eat **calcium, phosphorus and vitamin D** rich food stuffs as a preventive measure against rickets.

EXTRA QUESTIONS & ANSWERS

1. Define good health. What are the four determinants of health?

Ans: A good health is that who is in a state of complete physical, mental, and social well-being.

The four determinants of health are:

- (a) Human biology
- (b) Environment
- (c) Life style
- (d) Health care services

2. State any two conditions essential for good health.

Ans: The two conditions for good health are:

- (a) Taking a balanced diet
- (b) Social equality and harmony for mental good health.



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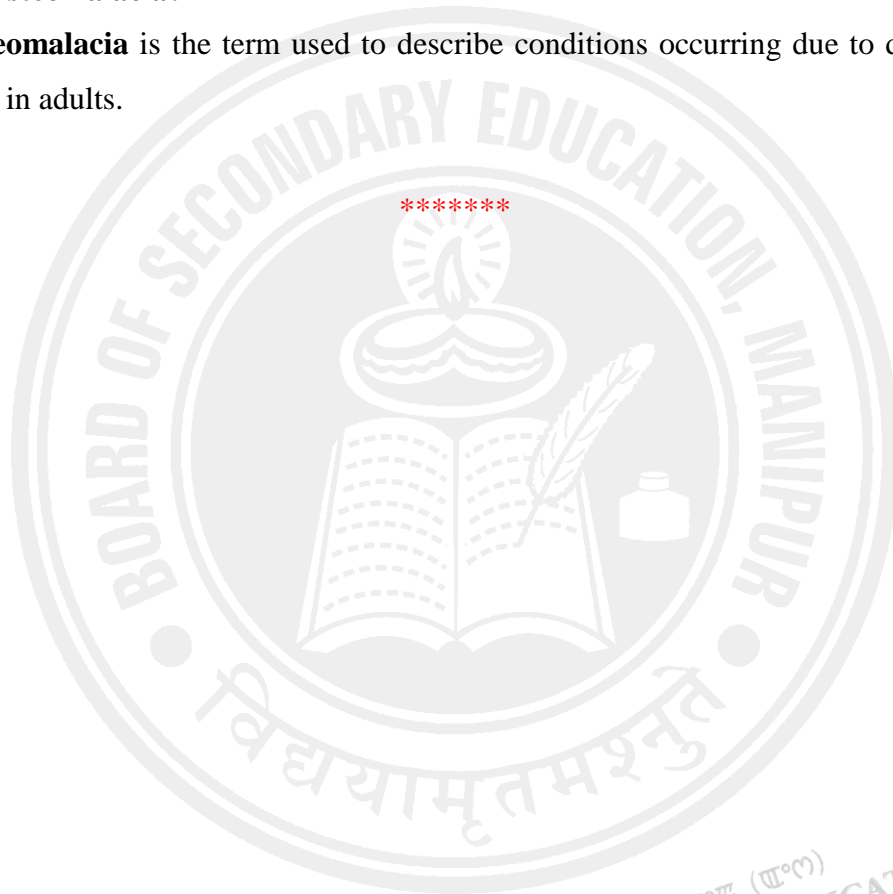
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3. Write the purpose of glucose and electrolytes present in the oral rehydration solutions (ORS).

Ans: The glucose in the **oral rehydration solution (ORS)** is to force the small intestine to quickly absorb the fluid and the electrolytes. The purpose of the electrolytes in the solution is the prevention and treatment of electrolyte deficiencies.

4. What is Osteomalacia?

Ans: Osteomalacia is the term used to describe conditions occurring due to deficiency of vitamin D in adults.



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