I. Multiple choice questions: Tick (✓) the correct choice.

1. Kwashiorkor is a disease caused by
   (a) microbes (b) deficiency of nutrients (c) environment (d) defects in body organs
   Ans. (b)

2. Which of the following is a disease caused by bacteria?
   (a) Cholera (b) AIDS (c) Malaria (d) Rabies
   Ans. (a)

3. Which of the following is not a viral disease?
   (a) Pneumonia (b) Measles (c) Polio (d) Rabies
   Ans. (a)

4. Ringworm is a disease caused by
   (a) Protozoa (b) Bacteria (c) Virus (d) Fungi
   Ans. (d)

5. Deficiency of vitamin C causes
   (a) scurvy (b) beri-beri (c) rickets (d) skin diseases
   Ans. (a)

6. Deficiency of vitamin K can cause
   (a) haemorrhage (b) bleeding gums (c) rickets (d) skin diseases
   Ans. (a)

7. Which of the following diseases is spread through coughing and sneezing?
   (a) Diphtheria (b) Hepatitis (c) Tetanus (d) Polio
   Ans. (a)

8. Malfunctioning of pancreas causes
   (a) diabetes (b) arthritis (c) cataract (d) goitre
   Ans. (a)

9. First vaccine was produced by
   (a) Pasteur (b) Fleming (c) Jenner (d) Robert Hooke
   Ans. (c)
10. Which of the diseases is transmitted by carrier?
   (a) Dengue   (b) Tetanus   (c) Hepatitis   (d) Common cold
   Ans. (a)

11. Hypertension is a
   (a) deficiency disease   (b) degenerative disease
   (c) infectious disease   (d) non-communicable disease
   Ans. (d)

12. Rickets is a deficiency disease in which we observe
   (a) deformity of bones   (b) bleeding of gums
   (c) swelling of neck   (d) rash on skin
   Ans. (a)

13. Leprosy
   (a) is a bacterial disease
   (b) spread by prolonged contact
   (c) prevalent in India   (d) all the above
   Ans. (a)

14. BCG is prevention against
   (a) cholera   (b) tuberculosis
   (c) diphtheria   (d) all the above
   Ans. (b)

15. Cholera spread through
   (a) contact of skin   (b) contaminated water
   (c) contaminated food   (d) Both b & c
   Ans. (d)

16. Which of these is not a viral disease?
   (a) Conjunctivitis   (b) Measles   (c) Tuberculosis   (d) Polio
   Ans. (c)

17. Which of these is a fungal disease?
   (a) Ringworm   (b) Mumps   (c) Hepatitis   (d) Rabies
   Ans. (a)

18. Typhoid spreads through
   (a) air   (b) insect bite   (c) canned food   (d) polluted water
   Ans. (d)
19. Botulism is a kind of 
   (a) heart disease (b) food poisoning 
   (c) delicious food (d) protozoa 
Ans. (b)
20. Ringworm is a disease of 
   (a) heart (b) kidney (c) skin (d) lungs 
Ans. (c)

II. Fill in the blanks.
1. The disease-causing micro-organisms are called .................. .
2. Cholera is caused by .................. .
3. The disease caused by the bite of a mad dog is .................. .
4. Over eating causes a disease called .................. .
5. Protruding belly is a symptom noticed in .................. .
6. The causative agent of tuberculosis is .................. .
7. .................. vaccine is used against tuberculosis.
8. Rickets is caused due to lack of .................. , .................. and .................. in the diet.
9. Goitre is caused due to deficiency of .................. .
10. Rabies is caused by .................. .
11. Polio is a .................. disease
12. Deficiency of vitamin C causes .................. .
13. Anaemia is caused due to deficiency of .................. .
15. Iodine is required for the secretion of .................. .


III. The odd one out, giving reasons:
1. Diabetes, arthritis, cataract, obesity.
Ans. (Obesity) Reason: Diabetes, arthritis and cataract are the
diseases caused due to malfunctioning of body organs while obesity is caused due to overnutrition.

2. Pneumonia, cholera, leprosy, measles.
   **Ans. (Measles) Reason:** Pneumonia, cholera and leprosy are the diseases caused by bacteria while measles is caused by virus.

3. Kwashiorkor, scurvy, beri-beri, night blindness.
   **Ans. (Kwashiorkor) Reason:** Scurvy, beri-beri and night blindness are vitamin-deficiency diseases while kwashiorkor is caused due to protein deficiency.

   **Ans. (Diabetes) Reason:** Cholera, diphtheria, typhoid all are communicable diseases while diabetes is a non communicable diseases.

5. Night blindness, beri-beri, typhoid, scurvy.
   **Ans. (Typhoid) Reason:** Night blindness, scurvy and beri-beri are vitamin-deficiency diseases while typhoid is caused by bacteria.

6. Typhoid, chickenpox, polio, measles.
   **Ans. (Typhoid) Reason:** Chicken pox, polio, measles are the diseases caused by virus while typhoid is caused by bacteria.

7. Calcium, vitamin D, iron, magnesium.
   **Ans. (Vitamin D) Reason:** Calcium, iron and magnesium are the minerals while vitamin D is vitamin.

   **Ans. (Goitre) Reason:** Diabetes, arthritis, heart attack, and cancer are the diseases which occur due to malfunctioning of body organs while goitre is caused by the deficiency of iodine.

9. Malaria, plague, measles, dengue, yellow fever.
   **Ans. (Measles) Reason:** Malaria, plague, dengue and yellow fever are the vector-borne diseases while measles is a viral disease and cannot be spread by vector.

10. Typhoid, cholera, jaundice, tuberculosis, tetanus.
    **Ans. (Jaundice) Reason:** Typhoid, cholera, tuberculosis, and tetanus are caused by microorganisms (bacteria) while jaundice is caused by micro-organism (virus).
IV. True or false:
1. Tuberculosis is a disease caused by bacteria.
2. Small pox is a disease caused by virus.
3. Leprosy is a viral disease.
4. TAB vaccine provides immunity for 3 years.
5. Allergies are caused due to decreased sensitivity of a person to some specific substances.


V. Mention the causal organisms of the following diseases:
1. Cholera
2. Tuberculosis
3. Common cold
4. Chickenpox
5. Typhoid
6. Polio
7. Rabies
8. Diarrhoea

Ans. Diseases  Causative agent
1. Cholera ................... Bacteria  (Vibrio cholerae)
2. Tuberculosis .......... Bacteria(Mycobacterium tuberculosis)
3. Common cold ............ Virus   (Rhinovirus)
4. Chickenpox ............. Virus   (Chickenpox virus)
5. Typhoid .................. Bacteria  (Salmonella typhi)
6. Polio ...................... Virus   (Polio virus)
7. Rabies .................... Virus   (Rabies virus)
8. Diarrhoea ............... Bacteria  (Vibrio cholerae)

VI. Given below are the names of a few diseases. Classify them according to microorganisms which causes them.
sleeping sickness, rabies, food poisoning, botulism, typhoid, mumps, chickenpox, whooping cough, hepatitis, conjunctivitis, ringworm, amoebic dysentery, diphtheria, influenza, cholera, plague, yellow fever, pneumonia

Ans. Sleeping sickness, amoebic dysentry, are caused by protozoans.
Botulism, typhoid, whooping cough, cholera, diphtheria, plague, pneumonia are caused by bacteria.
Rabies, mumps, chickenpox, hepatitis, conjunctivitis, influenza yellow fever are caused by **virus**.

Ringworm is caused by **fungus**.

**VII. Use the key words given below to fill in the following paragraph.**

Communicable, malaria, microorganisms, fungi, airborne, germs, bacteria, food poisoning, viral, protozoan, *Anopheles*, dog

Our unseen enemies are called ______ because most of them can only be seen with a microscope. Only those that are disease-causing are called ______ can only be seen with the aid of an electron microscope. Because of their small size, they can easily be transmitted from one person to another through a sneeze as an ______ infection. ______ are non-green plants which cause skin infection and _______. *Plasmodium* is a ______ which causes ______ and is transmitted by female ______ mosquito.

Rabies is a ______ disease which is spread by the bite of a ______. All the diseases which are caused by the microorganisms are called ______ diseases.

**Ans.** Our unseen enemies are called **microorganisms** because most of them can only be seen with a microscope. Only those that are disease-causing are called **germs** can only be seen with the aid of an electron microscope. Because of their small size, they can easily be transmitted from one person to another through a sneeze as an **air-born** infection. **Fungi** are non-green plants which cause skin infection and **food poisoning**. *Plasmodium* is a **protozoan** which causes **malaria** and is transmitted by female **Anopheles** mosquito. Rabies is a **viral** disease which is spread by the bite of a **dog**. All the diseases which are caused by the microorganisms are called **communicable** diseases.
VIII. Differentiate between the following:

1. Infectious diseases and Deficiency diseases

<table>
<thead>
<tr>
<th>Ans.</th>
<th>Infectious diseases</th>
<th>Deficiency diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>These diseases are caused by certain microorganisms like virus, bacteria, etc</td>
<td>These diseases are caused by the deficiency of certain nutrients in the food.</td>
</tr>
<tr>
<td>(2)</td>
<td>These diseases can be passed by an infected person to a healthy person either directly or indirectly.</td>
<td>These diseases can never be passed to a healthy person.</td>
</tr>
<tr>
<td>(3)</td>
<td>AIDS, Rabies, Typhoid, Plague are some infectious diseases.</td>
<td>Kwashiorkor and marasmus are deficiency diseases.</td>
</tr>
</tbody>
</table>

2. Acquired diseases and Congenital diseases

<table>
<thead>
<tr>
<th>Ans.</th>
<th>Acquired diseases</th>
<th>Congenital diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>Those diseases which develop after birth are called acquired diseases.</td>
<td>Those diseases which develop since birth are called congenital diseases.</td>
</tr>
<tr>
<td>(2)</td>
<td>Acquired diseases are of two types: Communicable and non-communicable.</td>
<td>Congenital diseases may be due to genetic factor or environmental factor or infection by microorganism.</td>
</tr>
<tr>
<td>(3)</td>
<td>Cholera, measles, food poisoning are some acquired diseases.</td>
<td>Down’s syndrome, Patucis syndrome are congenital diseases.</td>
</tr>
</tbody>
</table>

IX. Name the following:

1. Three deficiency diseases.
   Ans. (i) Kwashiorkor (ii) Marasmus (iii) Anaemia

2. Three vitamin-deficiency diseases.
   Ans. (i) Night blindness (ii) Scurvy (iii) Beri-Beri
3. Three mineral-deficiency diseases.
   Ans. (i) Anaemia  (ii) Goitre  (iii) Rickets  
   Ans. Virus, bacteria, fungi and protozoa are disease-causing microorganisms.
5. Two diseases each caused by bacteria, protozoa and virus.
   Ans. Diseases caused by bacteria  
   (i) Typhoid  (ii) Tuberculosis
   Diseases caused by protozoa  
   (i) Malaria  (ii) Dysentery
   Diseases caused by virus  
   (i) Polio  (ii) Rabies
6. Organism which causes malaria.
   Ans. Malaria is caused by a protozoan Plasmodium sps.
7. A viral disease caused due to unhealthy sexual contact.
   Ans. AIDS.
8. A bacterial disease caused due to contaminated water.
   Ans. Cholera
9. A disease caused due to Plasmodium.
   Ans. Malaria
10. A disease caused due to the bite of female Culex mosquito.
    Ans. Elephantiasis

X. Mention the food constituents which may be lacking in one’s diet, in case of the following:
1. A child having rickets.
   Ans. Due to deficiency of calcium in food a child may have rickets.
2. A person suffering from scurvy.
   Ans. Due to deficiency of vitamin C, a person may suffer from scurvy.
3. A person suffering from beri-beri.
   Ans. Due to deficiency of vitamin B, in food, a person may suffer from beri-beri.
4. A child suffering from kwashiorkor.
   Ans. Due to deficiency of **protein** in food, a child may suffer from kwashiorkor.

5. A person suffering from poor eyesight.
   Ans. Due to deficiency of **vitamin A** in food, a person may suffer from eyesight.

XI. (i) Match the disease named in column I with the appropriate cause given in column II.

<table>
<thead>
<tr>
<th>Column I</th>
<th>Column II</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chicken Pox</td>
<td>(a) Protozoan</td>
</tr>
<tr>
<td>2. Cholera</td>
<td>(b) Virus</td>
</tr>
<tr>
<td>3. Ringwosm</td>
<td>(c) Deficiency of iodine</td>
</tr>
<tr>
<td>4. Filaria</td>
<td>(d) Bacteria</td>
</tr>
<tr>
<td>5. Goitre</td>
<td>(e) Fungi</td>
</tr>
</tbody>
</table>

Ans. 1. (b) 2. (d) 3. (e) 4. (a) 5. (c).

(ii) Match the name of diseases with the cause.

<table>
<thead>
<tr>
<th>Disease</th>
<th>Cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Anaemia</td>
<td>(a) Deficiency of vitamin A</td>
</tr>
<tr>
<td>2. Night blindness</td>
<td>(b) Deficiency of vitamin B</td>
</tr>
<tr>
<td>3. Rickets</td>
<td>(c) Deficiency of iodine</td>
</tr>
<tr>
<td>4. Beri-beri</td>
<td>(d) Deficiency of vitamin C</td>
</tr>
<tr>
<td>5. Scurvy</td>
<td>(e) Deficiency of iron</td>
</tr>
<tr>
<td>6. Goitre</td>
<td>(f) Deficiency of vitamin D</td>
</tr>
</tbody>
</table>

Ans. 1. (e) 2. (a) 3. (f) 4. (b) 5. (d) 6. (c).

XII. Give reasons for the following.

1. Deficiency diseases are called non-communicable diseases.
   Ans. The diseases which occur due to inadequate quantity or the lack of some essential nutrients are called deficiency diseases. Deficiency diseases are also called non-communicable diseases because they cannot spread from one person to another by
certain carriers and remain only to the diseased person.

2. There are more chances of catching cold, influenza and measles in public places.

Ans. In public places, there are more chances of catching cold, influenza and measles because these are communicable diseases and can spread from one person to another.

3. You are advised not to eat food from the roadside vendors.

Ans. We must not eat food from the roadside vendors because it may contain disease-causing germs that can cause certain infectious diseases.

4. It is important to make sure that swimming pool water is clean.

Ans. It is important that swimming pool water must be clean because it may have some harmful microorganisms that can cause some infectious diseases.

5. There should be no stagnant water near your house.

Ans. A mosquito lays eggs on the stagnant water. These mosquitoes act as a carrier for certain infectious diseases like dengue. So, due to this reason, there should not be stagnant water near your house.

6. You should eat balanced diet.

Ans. A person should be taken a balanced diet because it has all the nutrients in the right quantity according to the requirement of the body.

7. A child who was suffering from conjunctivitis was sent home by her teacher.

Ans. Conjunctives is a viral and infectious disease. So, if in a classroom a child is suffering from conjunctivitis he must be sent to home because he can infect other children also.

8. A child bitten by a dog should be immediately taken to a doctor.

Ans. If a person is bitten by a dog he should be immediately taken to a doctor and get vaccinated. The saliva of dog contains Rabies virus that can infect the bitted person.
9. A person suffering from angina should get the cholesterol level checked up.

Ans. Angina is a temporary chest pain. It is due to atherosclerosis resulting in a reduction in the blood supply to the heart muscles. Atherosclerosis is due to higher cholesterol level. So a person suffering from angina should get the cholesterol level checked up.

10. Cigarette smoking is injurious to health.

Ans. Cigarette smoking is injurious to health because cigarette smoke contains nicotine, tar and carbon dioxide. All these things have harmful effects on the body like blood pressure, irritation of lungs, breathing problem, etc. So, anyone must avoid cigarette smoking.

XIII. Answer the following questions.

1. What are the causes of diseases?

Ans. A disease means a condition in which the normal function of some parts of the body (like tissues or organs) is disturbed. A disease may have many causes which are as follows:

(i) Due to malfunctioning of some vital organs like heart, kidneys etc. Diabetes, arthrities, and some heart diseases are due to malfunctioning of vital organs.

(ii) Due to imbalances of diet such as inadequate quantity of food (undernourishment) or excess of food (over nutrition) or lack of essential nutrition in food.

(iii) Due to some microorganisms like virus, bacteria, fungi, etc. AIDS, cholera, ringworm are some infectious diseases caused by these microorganisms.

(iv) Due to sensitivity of our body to some substances. This sensitivity of our body is called allergy. For example, asthma and hay fever are some allergic diseases caused by dust or pollen grains.

2. What are deficiency diseases?

Ans. The diseases that are caused due to inadequate intake of an
3. What is meant by PEM. Name the diseases caused by PEM.
   **Ans.** PEM means protein energy malnutrition. This term is used for diets that are lack of proteins and energy-giving carbohydrates. Kwashiorkor and marasmus are the diseases that are result from PEM.

4. Why should we not eat polished rice?
   **Ans.** Polished rice is a processed food that lacks vitamin B₁. Due to deficiency of vitamin B₁ we can suffer from Beri-Beri.

5. What are communicable diseases? Name three such diseases.
   **Ans.** Diseases which spread from one person to another person by direct or indirect control are called communicable diseases. Such diseases are caused due to some microorganisms such as bacteria, virus, fungi, and protozoa. These disease-causing germs are called pathogens.

6. What steps would you take to prevent and control diseases?
   **Ans.** We must follow the following steps to prevent and control diseases:
   - (i) We must take proper vaccination for immunisation against diseases.
   - (ii) We must use safe and clean water.
   - (iii) Always use net or mosquito repellent at the time of sleep.
   - (iv) Always take personal hygiene.
   - (v) Health education should be given by some organisations.

7. Mention the contributions of:
   - (i) Edward Jenner (ii) Louis Pasteur.
   **Ans.**
   - (i) Edward Jenner was the first scientist to develop vaccine against small pox.
   - (ii) Louis Pasteur was the first scientist who gave “germ theory of disease”.
8. Define the term health.
Ans. According to (World Health Organisation) WHO, health is a state of complete physical, mental and social well-being and not merely the absence of disease.

9. What are the main symptoms of rickets and scurvy diseases?
Ans. **Symptoms of rickets.** In children, rickets occur due to deficiency of calcium, phosphorus and vitamin D. Symptoms of this disease are bone deformities, bending of spine, loss of teeth enamel, pain in the bone and susceptibility to fracture.

**Symptoms of scurvy.** Scurvy is caused due to deficiency of vitamin C. The symptoms include swelling and bleeding of gums, pain in muscles and joints, generally weakness and fatigue. In this disease, wound healing is not easy.

10. Distinguish between communicable and noncommunicable diseases.

<table>
<thead>
<tr>
<th></th>
<th>Communicable diseases</th>
<th>Non-communicable diseases</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>These diseases spread from one person to another.</td>
<td>(1) These diseases do not spread from one person to another.</td>
</tr>
<tr>
<td>(2)</td>
<td>These diseases are caused by microorganisms.</td>
<td>(2) These diseases are caused due to deficiency of nutrients or malfunctioning of body organs.</td>
</tr>
<tr>
<td>(3)</td>
<td>AIDS, typhoid, plague are some communicable diseases.</td>
<td>(3) Kwashorkor, Marasmus, are some non-communicable diseases.</td>
</tr>
</tbody>
</table>

11. What is immunity? Name three diseases against which baby are immuned.
Ans. Immunity is the ability of a person that resists body against disease-causing microorganisms.
DPT vaccine is used against Diphtheria, Pertusis and Tetanus to immune a baby.
12. What is vaccine? How do they help in providing immunity against diseases?

**Ans.** A vaccine may consist of antigens or live or attenuated pathogens of a particular disease. A vaccine is inoculated inside the body to stimulate the formation of antibodies by the immune system of the body. Thus, a vaccine protects the person from a disease.

13. What measure should be taken to prevent typhoid?

**Ans.** Typhoid spreads by consuming contaminated food and water. House flies act as carriers from infected wastes to the human body. So keep flies under control and human faeces should be disposed at proper place. TAB vaccine is injected that provides immunity for three years.

14. What is botulism?

**Ans.** Botulism is a type of food poisoning caused by bacteria *Clostridium* Species.

15. What is diabetes? What are its symptoms?

**Ans.** Diabetes is a disease caused by malfunctioning of pancreas. A group of cells called islet of Langerhans in pancreas, manufacture insulin. When there cells do not produce insulin then body can neither use sugar nor store it in the liver. This sugar level increases in blood and pass out through urine. The symptoms of diabetes include frequent urination, excessive thirst, fatigue and weight loss.

16. What are the symptoms of rheumatoid arthritis and osteoarthritis?

**Ans.** **Rheumatoid arthrities.** It involves swelling, pain and stiffness in the joints specially finger joints.  
**Osteoarthritis.** It involves knobby enlargement of the end and middle joints of the fingers. It may also involve hip and knee joints.

17. What is atherosclerosis? How does it lead to coronary heart disease?

**Ans.** Due to deposition of cholesterol on the inner lining of arteries, it becomes hard, thick and rough. Thus, it decreases the diameter of arteries and reduce the flow of blood.
Due to atherosclerosis, heart muscles are deprived of blood supply that may cause a heart attack.

18. What is cancer? Name the agents which lead to cancer.
Ans. Cancer is an uncontrolled growth of cells in body tissues. It results in invasion and destruction of surrounding healthy tissues. Cells of cancerous tissues spread via the blood stream or lymphatic system to other parts of the body. Malignant tumour is another name of cancer.

The main cause of cancer is still unknown. But the causative agents may include UV rays, certain chemicals, and cigarette smoking. A person smoking more cigarette has greater chances to develop lung cancer.

19. What are the effects of alcohol on human body?
Ans. Alcohol in small relaxes the brain. But when it is consumed in larger quantity, it affects the brain. There is difficulty in muscular coordination and person cannot speak clearly. Larger quantity of alcohol also affects the kidney and liver. After a certain period this may lead to malfunctioning of kidney and liver.

20. What are antibodies?
Ans. Antibodies are the types of a protein that make immune system of the body and prevent it from the attack of foreign bodies.
When a microbe attack a person, some specific antibodies develop to fight it and prevent it to cause a disease. Thus, antibodies prevent from disease-causing organisms.

21. Name any three water-borne diseases.
Ans. Hepatities, cholera and dysentery are water-borne diseases.

22. Biting nails should be strictly avoided. Give reason.
Ans. Biting of nails should be avoided because the dirt in the nails may contain certain disease-causing organisms. Thus, biting of nails is a bad habit and must be avoided.

23. Regular exercise and proper rest is a must. Give reason.
Ans. Regular exercise and proper rest is a must for our body. Regular exercise keep our muscles active. It also helps in the normal functioning of vital organs like heart and lungs.

****

Biology Class VIII 15 Question Bank