

Short Answer Type Questions – I

[2 marks]

Q. 1. What is a balanced diet?

Ans. A balanced diet is the one which contains a variety of foods in such quantities and proportions that the need for energy, amino acids, vitamins, minerals, water and roughage is adequately met for maintaining health, vitality and general well being.

Q. 2. Why is immune system essential for our health?

Ans. The immune system of our body is a defence mechanism to fight against pathogenic microbes. It has cells that are specialised to kill infecting microbes and keep our body healthy. If the body's immune system is strong, it can easily fight pathogens, keeping us healthy.

Q. 3. why is mother's milk best for babies?

Ans. Mother's milk is rich in proteins and other nutrients. It provides a complete diet to the baby. Intake of mother's milk increases body weight, body muscles and subcutaneous fat.

Q. 4. What are the two basic principles of prevention of infectious diseases?

Ans. The two basic principles of prevention of infectious diseases are:

(a) Prevention from exposure to infectious microbes.

(b) Provision of proper nutrition to keep the immune system in a healthy state.

Q. 5. What is the mechanism of action of antibiotics?

Ans. Antibiotics are chemical substances obtained from some microbes, which stop the growth of specific kind of pathogens. They block certain biochemical pathways important for the lifecycle of pathogen. For example, penicillin does not allow cell wall formation in some bacteria. It blocks chemical reaction required for cell wall formation.

Q. 6. 'Public cleanliness is important for individual health'. Comment.

Ans. The garbage thrown in open places, overflowing drains or sewer water, stagnant water, etc. are the places where disease-causing microbes multiply and mosquitoes and flies breed. These mosquitoes and flies act as carriers of disease-causing microbes. As a result, diseases may spread in the community and affect individual health. Thus, public cleanliness is important for individual health.

Q. 7. Why is vaccination considered a prevention of diseases?

Ans. Vaccines induce a specific immune response in the body. This response also produce memory cells which persist in the body even in the absence of pathogen. If the pathogen attacks the body again, the immune system with the help of memory cells recognise it and destroy it before it causes the disease.

Q. 8. Why is social equality necessary for individual health?

Ans. If the mind is cheerful and happy, people are not prone to tensions. Moreover, as they are not disturbed, they will take care about doing anything which affects their health. On the other hand, if people are socially disturbed and unsafe, they cannot be happy and healthy. So, social equality is necessary for individual health.

Q. 9. Why are good economic conditions needed for individual health?

Ans. First of all, for good health, proper and sufficient food is necessary. This food can be obtained only by spending money, for which the individual has to earned. So, opportunity to work and earn have to be made available for which there must be good economic conditions in the society.

Q. 10. Describe congenital disease.

Ans. Congenital disease is the one that is present in an individual from birth. This may be due to genetic abnormality, metabolic disorders or malfunctioning of any body organ. These are permanent and are generally not easily curable. These are passed to the children from parents.

Q. 11. Describe deficiency diseases.

Ans. Deficiency diseases are caused due to deficiency of certain nutrients in our diet like proteins, minerals and vitamins. It is a type of non-communicable disease. Examples: Kwashiorkor, marasmus, anaemia, etc.

Q. 12. Describe degenerative diseases.

Ans. Degenerative diseases are caused due to malfunctioning of body organs or degeneration of tissues in old age. It is a type of non-communicable disease. Example: Kidney failure is due to improper functioning of kidneys, cancer is due to uncontrolled growth of tissues in any part of the body, etc.

Q. 13. Why is it considered important to study the different categories of infectious agents?

Ans. The infectious agents have been categorised, as these categories are important factors in deciding the kind of treatment to be used to treat the diseases caused by them.

Q. 14. Why there is no use of giving vaccine of hepatitis A virus?

Ans. As the majority of children in many parts of India are exposed to the virus causing hepatitis A, they are already immune to hepatitis A by the time they are five years old. So, there is no use of giving vaccines.

Q. 15. Why are antibiotics not effective for viral disease?

Ans. Antibiotics act by inhibiting the biosynthetic pathways. This way they eventually die. However, viruses do not have components for the biosynthetic pathways. Instead, they utilise the components of the host body to complete their life cycles. Therefore, antibiotics are not effective against viruses.

Q. 16. (i) Which bacterium causes peptic ulcers?

(ii) Who discovered the above pathogen for the first time?

Ans. (i) *Helicobacter pylori*.

(ii) Marshall and Warren.

Q. 17. What do you mean by disease symptoms? Explain giving two examples.

Ans. When the functioning or the appearance of one or more systems of the body will change for the worse, it gives certain abnormal signs of the disease. These visual changes in human beings are called symptoms. Symptoms give indication of the presence of a particular disease.

Examples: (i) Cough is the symptom of lung infection.

(ii) Lesions on the skin are the symptoms of chicken pox.

Q. 18. Becoming exposed to or infected with an infectious microbe does not necessarily mean developing noticeable disease. Explain.

Ans. Because of strong immune system, our body is normally fighting off microbes. We have cells which are specialised to kill the pathogenic microbes. These cells are active when infecting microbes enter the body and if they are successful in removing the pathogen, we remain disease-free. So even if we are exposed to infectious microbes, it is not necessary that we suffer from diseases.

Q. 19. (i) Name two diseases caused by Protozoa.

(ii) What are their causal organisms?

Ans. (i) Sleeping sickness caused by *Trypanosoma* and malaria by *Plasmodium*.

(ii) Kala-azar caused by *Leishmania*.