

Chapter - 13 Why do we Fall ill

Multiple Choice Questions

Q1. Which one of the following is not a viral disease?

- (a) Dengue
- (b) AIDS
- (c) Typhoid
- (d) Influenza

Answer: Option c) Typhoid

Typhoid is a bacterial disease by *Salmonella typhi*. Dengue, AIDS and influenza are viral diseases by flavi-ribo virus, human immuno-deficiency virus (HIV) and orthomyxovirus.

Q2. Which one of the following is not a bacterial disease?

- (a) Cholera
- (b) Tuberculosis
- (c) Anthrax
- (d) Influenza

Answer: Option d) Influenza

Influenza is a viral disease by orthomyxovirus and cholera, tuberculosis and anthrax are bacterial diseases by *Vibrio cholerae*, *Mycobacterium tuberculosis* and *Bacillus anthracis*.

Q3. Which one of the following diseases is not transmitted by mosquito?

- (a) Brain fever
- (b) Malaria
- (c) Typhoid
- (d) Dengue

Answer: Option (c) Typhoid

Typhoid is a bacterial disease by *Salmonella typhi* spread by contaminated food and water. Brain fever (Japanese encephalitis), Malaria and dengue spread by *Culex*, female *Anopheles* and *Aedes* mosquitoes respectively

Q4. Which one of the following diseases is not caused by bacteria?

- (a) Typhoid
- (b) Anthrax
- (c) Tuberculosis
- (d) Malaria

Answer: Option d) Malaria

Malaria is a protozoan disease by *Plasmodium* and is transmitted from infected to healthy people by female *Anopheles* mosquito.

Q5. Which one of the following diseases is caused by protozoans?

- (a) Malaria
- (b) Influenza
- (c) AIDS
- (d) Cholera

Answer: Option a) Malaria

Q6. Which one of the following has a long-term effect on the health of an individual?

- (a) Common cold
- (b) Chicken pox
- (c) Chewing tobacco
- (d) Stress

Answer: Option c) Chewing tobacco

Common cold and chicken pox are diseases of short duration. Stress can be acute or chronic and it can have short or long-term effect. Chewing tobacco has long term effects due to addiction. It causes heart and lung diseases etc.

Q7. Which of the following can make you ill if you come in contact with an infected person?

- (a) High blood pressure**
- (b) Genetic abnormalities**
- (c) Sneezing**
- (d) Blood cancer**

Answer: Option c) Sneezing

On sneezing, an infected person releases droplet with disease-causing microorganisms which are inhaled by a healthy person on contact with an infected person and make him ill.

Q8. AIDS cannot be transmitted by

- (a) sexual contact**
- (b) hugs**
- (c) breastfeeding**
- (d) blood transfusion.**

Answer: Option b) hugs

AIDS is an infectious disease through sexual contact, use of contaminated syringes, from infected mother to child during pregnancy or breast-feeding, blood-transfusion, organ-transplantation, etc.

AIDS is not transmitted by shaking hands, kissing, hugging, insect bites, sharing towels, etc.

Q9. Making anti-viral drugs is more difficult than making anti-bacterial medicines because

- (a) viruses make use of host machinery
- (b) viruses are on the border line of living and non-living
- (c) viruses have very few biochemical mechanisms of their own
- (d) viruses have a protein coat

Answer: Option a) viruses make use of host machinery

Antiviral medicines are not easily prepared than anti-bacterial drugs as viruses have biochemical mechanisms of their own and enter host's cells to use its machinery for their life processes.

Q10. Which one of the following causes kala-azar?

- (a) Ascaris
- (b) Trypanosoma
- (c) Leishmania
- (d) Bacteria

Answer: Option c) Leishmania

Leishmania Donovan is a parasitic protozoan causing kala-azar (dum-dum fever) transmitted by sandfly.

Q11. If you live in a overcrowded and poorly ventilated house, it is possible that you may suffer from which of the following diseases.

- (a) Cancer
- (b) AIDS
- (c) Air borne diseases
- (d) Cholera

Answer: Option c) Air borne diseases

In overcrowded and poorly ventilated areas, the air borne diseases spread as infectious microbes cause common cold, tuberculosis, pneumonia, etc. which spread through air from infected persons by water droplets on sneezing, coughing or spitting.

Q12. Which disease is not transmitted by mosquitoes?

- (a) Dengue**
- (b) Malaria**
- (c) Brain fever or encephalitis**
- (d) Pneumonia**

Answer: Option d) Pneumonia

Pneumonia is a bacterial disease by *Streptococcus pneumoniae* and *Haemophilus influenzae* of lungs, transmitted by coughing, sneezing or spitting.

Q13. Which one of the following is not important for individual health?

- (a) Living in clean space**
- (b) Good economic condition**
- (c) Social equality and harmony**
- (d) Living in a large and well-furnished house**

Answer: Option d) Living in a large and well-furnished house

Living in a large and well-furnished house is not an essential for good health. A small and less furnished house also keep good health by hygiene in house and surrounding.

Q14. Choose the wrong statement.

- (a) High blood pressure is caused by excessive weight and lack of exercise.**
- (b) Cancers can be caused by genetic abnormalities.**
- (c) Peptic ulcers are caused by eating acidic food.**
- (d) Acne is not caused by staphylococci.**

Answer: Option c) Peptic ulcers are caused by eating acidic food.

Peptic ulcers are painful blisters in the mucous membrane of stomach (gastric ulcer) or duodenum (duodenal ulcer) which causes pain and bleeding in the stomach and duodenum and is due to bacterium *Helicobacter pylori* or drugs.

Q15. We should not allow mosquitoes to breed in our surroundings because they

- (a) multiply very fast and cause pollution.**
- (b) are vectors for many diseases.**
- (c) bite and cause skin diseases.**
- (d) are not important insects.**

Answer: Option b) are vectors for many diseases.

Vectors are living organisms to transmit infectious diseases from animals to humans or from humans to humans. Mosquitoes are the blood-sucking insects which ingest microorganisms through blood of an infected host (human or animal) and inject into new host and are vectors for diseases like dengue, malaria, filariasis, brain fever, chikungunya, yellow fever, etc.

Q16. You are aware of Polio Eradication Programme in your city. Children are vaccinated because

- (a) vaccination kills the polio causing microorganisms**
- (b) prevents the entry of polio causing organism**
- (c) it creates immunity in the body**
- (d) all the above.**

Answer: Option c) it creates immunity in the body

Vaccination is a process to develop immunity without infection and prepare antigenic proteins of pathogens, weakened or dead pathogens which on inoculation in a healthy person gives temporary or permanent immunity against the diseases by inducing antibodies formation.

Q17. Viruses, which cause hepatitis, are transmitted through

- (a) air**

- (b) water
- (c) food
- (d) personal contact.

Answer: Option a) air

Hepatitis is a swelling of liver, caused by virus like Hepatitis A, Hepatitis B, Hepatitis C, Hepatitis D and Hepatitis E due to intake of contaminated food, water, sexual contact, from mother to child in pregnancy or child birth, sharing syringes, blood transfusion, etc.

Q18. Vectors can be defined as

- (a) animals carry the infecting agents from sick person to another healthy person
- (b) microorganisms which cause many diseases
- (c) infected person
- (d) diseased plants.

Answer: Option a) animals carry the infecting agents from sick person to another healthy person

Vectors are living organisms to transmit infectious diseases from animals to humans or from humans to humans. Mosquitoes are the blood-sucking insects which ingest microorganisms through blood of an infected human or animal and later inject into new host and are vectors for diseases like dengue, malaria, filariasis, brain fever, chikungunya, yellow fever, etc.

Short Answer Type Questions

Q19. Give two examples for each of the following.

- (a) Acute diseases
- (b) Chronic diseases
- (c) Infectious diseases
- (d) Non-infectious diseases

Answer:

(a) Acute disease: Common cold, typhoid, chicken-pox

(b) Chronic diseases: Diabetes, tuberculosis, elephantiasis

(c) Infectious diseases: Small-pox, chicken-pox, measles

(d) Non-infectious diseases: Diabetes, goitre, kwashiorkor

Q20. Name two diseases caused by Protozoans. What are their causal organisms?

Answer:

Two diseases caused by protozoans are malaria and sleeping sickness. For malaria it is Plasmodium vivax and sleeping sickness is Trypanosoma gambiense.

Q21. Which bacterium causes peptic ulcers? Who discovered the above pathogen for the first time?

Answer:

Helicobacter pylori is the bacterium which cause peptic ulcers and revealed by B. Marshall and R. Warren (2005).

Q22. What is an antibiotic? Give two examples.

Answer:

Antibiotics are chemicals of microorganisms like fungi and bacteria to kill or hinder the growth of microorganisms like bacteria, e.g., penicillin and streptomycin.

Q23. Fill in the blanks.

(a) Pneumonia is an example of _____ disease.

(b) Many skin diseases are caused by _____.

(c) Antibiotics commonly block biochemical pathways important for the growth of _____.

(d) Living organisms carrying the infecting agents from one person to another are called _____.

Answer:

- (a) infectious/communicable
- (b) fungi
- (c) bacteria
- (d) vectors

Q24. Name the target organs for the following diseases.

- (a) Hepatitis targets _____.
- (b) Fits or unconsciousness targets _____.
- (c) Pneumonia targets _____.
- (d) Fungal disease targets _____.

Answer:

- (a) liver
- (b) brain
- (c) lungs
- (d) skin

Q25. Who discovered 'vaccine' for the first time? Name two diseases which can be prevented by using vaccines.

Answer:

Edward Jenner (1796) discovered vaccine which prevent diseases like small pox, tetanus, polio, measles, hepatitis-B, tuberculosis, etc.

Q26. Fill in the blanks.

- (a) _____ disease continues for many days and causes _____ on body.
- (b) _____ disease continues for a few days and causes no longer term effect on body.

(c) _____ is defined as physical, mental and social well-being and comfort.

(d) Common cold is _____ disease.

(e) Many skin diseases are caused by _____ .

Answer:

(a) Chronic, long term effect

(b) Acute

(c) Health

(d) infectious/communicable

(e) fungi

Q27. Classify the following diseases as infectious or non-infectious.

(a) AIDS

(b) Tuberculosis

(c) Cholera

(d) High blood pressure

(e) Heart disease

(f) Pneumonia

(g) Cancer

Answer:

Infectious diseases — AIDS, tuberculosis, cholera, pneumonia.

Non-infectious diseases — High blood pressure, heart disease, cancer.

Q28. Name any two groups of micro-organisms from which antibiotics could be extracted.

Answer:

Bacteria and Fungi are microorganisms from which antibiotics is extracted

Q29. Name any three diseases transmitted through vectors.

Answer:

Three diseases spread by vectors are sleeping sickness by tsetse fly, malaria by female Anopheles mosquito and dengue by Aedes mosquito.

Long Answer Type Questions

Q30. Explain giving reasons.

- (a) Balanced diet is necessary for maintaining healthy body.**
- (b) Health of an organism depends upon the surrounding environmental conditions.**
- (c) Our surrounding area should be free of stagnant water.**
- (d) Social harmony and good economic conditions are necessary for good health.**

Answer:

(a) Balanced diet consists of nutrients like carbohydrates, fats, vitamins, minerals, proteins for proper health, growth, repair and diseases. Lack of balanced diet causes diseases.

(b) Health is a state to function physically, mentally and socially and depend on the surrounding environment. Unhygienic conditions in the surrounding area like piling of garbage, stagnant water etc. cause infection and disease.

(c) Stagnant water is the breeding place for disease-causing organisms and vectors which spread diseases. So, our surrounding area should be clean of stagnant water.

(d) Social harmony is peaceful interaction among members of a social groups. As human beings live in societies so, social environment plays a vital role in affecting their health. Localities like villages, towns, cities, etc. are social and physical environment, which are in harmony to -maintain every individual's health. Good economic conditions maintain good health and food for healthy body. For the prevention and treatment of diseases, good economic condition is essential to avail proper vaccination, good sanitary conditions, medicines, health advise, etc.

Q31. What is a disease? How many types of diseases have you studied? Give examples.

Answer:

Disturbance in the working of a tissue, organ or organ system causing discomfort is disease.

Human diseases are classified into:

- (i) **Acute diseases:** They are short duration diseases in which normal activity of the person is weakened for a few days. Examples—common cold, typhoid, diarrhea, etc.
- (ii) **Chronic diseases:** They are long duration diseases which last for a long time. Examples— elephantiasis, diabetes, arthritis, etc.
- (iii) **Infectious or communicable diseases:** They are caused by pathogens like bacteria, viruses, protozoans, etc. and spread from diseased person to the healthy by air, food, water, vectors, physical contact etc. Examples—tuberculosis, chicken-pox, dengue, etc.
- (iv) **Non-infectious or non-communicable diseases:** They remain limited to the person. They are caused by deficiency of nutrients, imbalance of hormones, malfunctioning of some organs or of immune system, etc. Examples—Epilepsy, allergy, goitre, Marasmus, etc.

Q32. What do you mean by disease symptoms? Explain giving two examples?

Answer:

When the functioning of one or more systems of the body shows a drastic change, it gives abnormal sign of the disease called symptoms. It is indication of the presence of a particular disease. Examples:

- (i) Cough and breathlessness in tuberculosis.
- (ii) Swelling and infection in liver are the symptoms of jaundice.

Q33. Why is immune system essential for our health?

Answer:

The immune system is a defense mechanism to fight against pathogens and has cells to kill infecting microbes and protect from diseases. The immune cells kill the infection. So, a strong immune system is essential for healthy body.

Q34. What precautions will you take to justify “prevention is better than cure”.

Answer:

If we prevent the disease-causing pathogens into our body, we also prevent the disease from spreading then curing the disease after suffering from it. To prevent the disease the precautions are:

- a) To take balance diet
- b) To maintain proper hygiene.
- c) To maintain proper sanitary conditions.
- d) Health education and awareness about diseases in people.
- e) Clean air and safe drinking water.
- f) Medical checkup at regular intervals
- g) Vaccination

Q35. Why do some children fall ill more frequently than others living in the same locality?

Answer:

Frequency of falling ill depends on immune system of body to fight against pathogens. Some children fall ill frequently due to weak immune system. Balanced nutrition and exercise are essential for strong immune system.

Q36. Why are antibiotics not effective for viral disease?

Answer:

Antibiotics block the biosynthetic pathways of the pathogen like bacteria. Viruses, have few biochemical pathways as they use the metabolic machinery of the host to reproduce. So, antibiotics cannot block biochemical pathways.

Q37. Becoming exposed to or infected with an infectious microbe does not necessarily mean developing noticeable disease. Explain.

Answer:

Microbes of diseases are present in surrounding and are in contact with persons suffering from infectious diseases directly or indirectly. Strong immune system and presence of antibodies prevent disease.

Strong Immune system fights with pathogens in the body. Antibodies fight with pathogens in natural way or produced inside the body through vaccination.

Q38. Give any four factors necessary for a healthy person.

Answer: Four factors are:

- a) Proper nutrition, balanced diet with regular exercise is essential for good immune system.
- b) Personal hygiene helps to prevent infectious diseases.
- c) Cleanliness of surroundings helps to prevent air, water and vector borne diseases.
- d) Immunization of diseases stops them to occur and spread.

Q39. Why is AIDS considered to be a 'Syndrome' and not a disease?

Answer:

HIV or Human immunodeficiency virus causes AIDS in the body by sexual organs or blood transfusion which help to spread to lymph nodes of the body. The virus damages the immune system of the body and body cannot fight minor infections even cold can be changed to pneumonia or minor gut infection change to severe diarrhea with blood loss.

The effect of disease is very severe and complex and kill the person suffering from AIDS as there is no specific disease symptoms for AIDS. So, known as a syndrome.