

## Chapter - 13

### why do we fall ill

#### Multiple Choice Questions

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

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

**Soln:**

Answer is (c) Typhoid

**Explanation:**

Typhoid is caused by a bacterium called as *Salmonella typhi*

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

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

**Soln:**

Answer is (d) Influenza

**Explanation:**

Cholera is caused by *Vibrio cholera* bacterium

Tuberculosis is caused by *Mycobacterium tuberculosis* bacteria

Anthrax is caused by *Bacillus anthracis* bacteria.

Influenza is caused by Influenza virus hence option d) is the right answer.

3. Which one of the following disease is not transmitted by mosquito?

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

**Soln:**

Answer is (c) Typhoid

**Explanation:**

Typhoid is transmitted through food and water.



**4. Which one of the following disease is not caused by bacteria?**

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

**Soln:**

Answer is (d) Malaria

**Explanation:**

Malaria is caused by protozoans called *Plasmodium vivax* hence d) is the right answer

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

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

**Soln:**

Answer is (a) Malaria

**Explanation:**

Malaria is caused by protozoan *Plasmodium vivax*.

**6. 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

**Soln:**

Answer is (c) Chewing tobacco

**Explanation:**

Common cold and chicken pox are acute diseases which will not produce any long term effect. Stress can be managed and will not have long term effect. Chewing tobacco is dangerous as it produces a long term effect.

**7. 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



**Soln:**

Answer is (c) Sneezing

**Explanation:**

Sneezing is a symptom of common and other respiratory disease which are transmitted through inhaling of contaminated air. Other option provided in the question are not infectious disease hence they are not transmitted through human contact.

**8. AIDS cannot be transmitted by**

- (a) sexual contact
- (b) hugs
- (c) breast feeding
- (d) blood transfusion

**Soln:**

Answer is(b) hugs

**Explanation;**

AIDS is transmitted by exchange of body fluids. When we hugs there cannot be exchange of any body fluids hence Aids cannot be transmitted by hugs.

**9. 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

**Soln:**

Answer is (c) viruses have very few biochemical mechanisms of their own

**Explanation:**

Antibacterial drugs stop certain biochemical reaction in the bacteria that kills the bacteria. But in virus there are few biochemical processes which are difficulty to target hence making anti-viral drugs is difficult.

**10. Which one of the following causes kala-azar?**

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

**Soln:**

Answer is (c) Leishmania

**11. 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

**Soln:**

Answer is (c) Air borne diseases

**12. Which disease is not transmitted by mosquitoes?**

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

**Soln:**

Answer is (d) Pneumonia

**Explanation:**

Pneumonia is transmitted through air not mosquitos.

**13. 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

**Soln:**

Answer is (d) Living in a large and well furnished house

**14. 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

**Soln:**

Answer is (c) Peptic ulcers are caused by eating acidic food

**Explanation:**

Answer c is wrong because peptic ulcers are caused by a bacterium call as *Helicobacter pylori*

**15. 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**

**Soln:**

Answer is (b) are vectors for many diseases

**Explanation:**

Mosquitos are dangerous as they spread disease like Malaria, Dengue, Japanese encephalitis etc.

**16. 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**

**Soln:**

Answer is (c) it creates immunity in the body

**Explanation:**

Vaccines create immunity against the pathogens against which it is designed.

**17. Viruses, which cause hepatitis, are transmitted through**

- (a) air**
- (b) water**
- (c) food**
- (d) personal contact**

**Soln:**

Answer is (b) water

**18. 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**

**Soln:**

Answer is (a) animals carry the infecting agents from sick person to another healthy person.

### Short Answer Questions

**19. Give two examples for each of the following**

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

**Soln:**

- (a) Acute diseases – Flu, Viral fever
- (b) Chronic diseases – Tuberculosis, Elephantiasis
- (c) Infectious diseases – Small pox, chicken pox
- (d) Non-infectious diseases- Diabetes, Cancer

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

**Soln:**

Malaria is caused by *Plasmodium vivax*  
Kala azar is caused by *Leishmania*

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

**Soln:**

Peptic ulcers are caused by bacterium *Helicobacter pylori*. This bacteria was discovered by Barry J Marshal and Robin Warren.

**22. What is an antibiotic? Give two examples**

**Soln:**

Antibiotic is a chemical agent that kills the bacteria or fungi by blocking their biochemical pathway. Ex: Streptomycin, Azithromycin.

**23. 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 \_\_\_\_\_.

**Soln:**

- (a) Pneumonia is an example of **Bacterial** disease.
- (b) Many skin diseases are caused by **Fungi**.
- (c) Antibiotics commonly block biochemical pathways important for the growth of **Bacteria**.
- (d) Living organisms carrying the infecting agents from one person to another are called **Vectors**.

**24. Name the target organs for the following diseases**

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

**Soln:**

- (a) Hepatitis targets **Liver**.
- (b) Fits or unconsciousness targets **Brain**.
- (c) Pneumonia targets **Lungs**.
- (d) Fungal disease targets **Skin**.

**25. Who discovered ‘vaccine’ for the first time? Name two diseases which can be prevented by using vaccines.**

**Soln:**

Edward Jenner discovered vaccine. Polio and tetanus are the disease which can be prevented by using vaccines.

**26. 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——.

**Soln:**

- (a) **Chronic** disease continues for many days and causes **long term effect** on body.
- (b) **Acute** disease continues for a few days and causes no longer term effect on body.
- (c) **Health** is defined as physical, mental and social well-being and comfort.
- (d) Common cold is **viral** disease.
- (e) Many skin diseases are caused by **Fungi**.



**27. 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

**Soln:**

- (a) AIDS – Infectious disease
- (b) Tuberculosis - Infectious disease
- (c) Cholera - Infectious disease
- (d) High blood pressure- non- Infectious disease
- (e) Heart disease non- Infectious disease
- (f) Pneumonia-Infectious disease
- (g) Cancer- non- Infectious disease

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

**Soln:**

Bacteria and fungi

**29. Name any three diseases transmitted through vectors.**

**Soln:**

Malaria transmitted by mosquitos  
Rabies transmitted by mad dogs  
Elephantiasis is transmitted by mosquitos.

**30. 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.**

**Soln:**

a) Food is essential for the growth and normal function of our body. Balanced diet is the one which consists of all the essential nutrients in an appropriate quantity. Balanced diet provided appropriate amount of biomolecules such as carbohydrates, lipids, proteins, vitamins and minerals which are very essential for our growth and body functioning. Imbalance in diet lead to many physical and physiological diseases.

b) Health is defined as physical, mental and social well-being and comfort. Health is always dependent on our surroundings and if our environment is unhygienic we get disease. We get cold and cough in rainy and winter season. Our environment conditions are very important for being healthy.





c) Stagnant water is the breeding environment for mosquitos. Mosquitos spread many diseases like Malaria, Dengue, Elephantiasis, chickungunys etc. In order to stop spread of these disease our surrounding should be free of stagnant water.

d) Human beings are social organisms. We live in different localities and environments. In order to lead a healthy life we have to keep our environment clean. We need good hygienic food to lead healthy life which depends on our earnings. We often encounter diseases, in order to get treatment we need money and our economic status should be strong to afford the treatments.

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

**Soln:**

Each organs of an organ system has specific functions to do. When this functioning change or disrupt it leads to a condition called disease. These changes results in some adverse effects on body's normal functioning and the changes observed are called signs and symptoms of the disease.

### **Types of Diseases**

Acute:

Diseases that last for only very short periods of time, are called acute diseases. Ex: common cold

Chronic:

Diseases that last for a long time, even as much as a lifetime are called chronic diseases. Ex: elephantiasis.

Infectious:

Diseases which are caused by microorganisms are called infectious diseases. These disease can spread from one person to another by vectors or by other means such as air, food and water. Ex: Typhoid

Non- Infectious

Diseases that are not caused by infectious agents. Their causes vary, but they are not external causes like microbes that can spread in the community. Instead, these are mostly internal, non-infectious causes. Example: High blood pressure.

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

**Soln:**

When we encounter with disease some or more parts of our body start behaving abnormal and give certain signs which are not normal. Such visible changes in our body are called as symptoms.

Ex: When we get cold our body responds and we start coughing and sneezing and in some cases our body temperature increase these changes in our body are the symptoms of common cold.



When we get Malaria our body temperature increases our body start shivering due to chills.

### **33. Why is immune system essential for our health?**

**Soln:**

Immune system is the defense line of our body. Immune system comprise of different kind of cells that kills the infecting microorganism. When a pathogen enters our body our immune system send immune cells to fight and kill pathogens. If our immune system clear the disease causing pathogens we stay healthy. If our immune system fail to clear pathogen we encounter disease. In order to be healthy immune system is essential.

### **34. What precautions will you take to justify “prevention is better than cure”.**

**Soln:**

Precautions to take to avoid diseases are as follows

1. Maintaining personal as well as public hygiene is very essential
2. Awareness about causes, symptoms and source of diseases
3. Using clean water and avoid storage of water to avoid growth of mosquitos.
4. Balanced diet
5. Regular exercise will boost our immunity
6. Vaccination

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

**Soln:**

There may be many reasons behind fall ill of few children . Some of them are listed below.

Lack of balanced diet leading to malnutrition

Weak immunity

Living in congested unhygienic conditions

Lack of clean drinking water and hygienic food

Missing vaccinations.

### **36. Why are antibiotics not effective for viral disease?**

**Soln:**

Antibiotics act on bacteria and fungi by blocking certain biochemical activities necessary for the living of bacteria. On the other hand virus has very few biochemical processes which are hard to target for antibiotic. Hence antibiotics are not effective against viruses.



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

**Soln:**

Our immune system fight disease causing pathogens and clears them by killing to gives us protection from disease. When we get exposed to certain pathogen our immune system sends active cells that kill and clear the pathogen. Because of the immune system we don't often get disease despite of getting exposed to infectious microbe.

**38. Give any four factors necessary for a healthy person.**

**Soln:**

**Hygienic environment:**

Clean water and a hygienic surrounding can keep us away from water and air borne diseases.

**Personal Hygiene:**

We should keep our body clean to be healthy.

**Food:**

Hygienic and nutritious food help to boost immune system hence balanced diet is essential for being healthy.

**Vaccination:**

Vaccination against severe disease is very essential to be healthy.

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

HIV AIDS is caused by HIV Virus which enter our body through body fluids such as blood and breast milk or by sexual means. HIV virus spread to lymphnodes and it block our immune system. This creates a condition where our body cannot fight minor diseases like common cold.

A person with HIV can get pneumonia from common cold, minor gut infection may turn into sever diarrhoea. In HIV a person will not have specific symptoms rather he will have a series of infections due hence HIV is called as a syndrome not a disease.

