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## 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

Ans. (c) Typhoid

**Explanation:** Typhoid is a bacterial disease.

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

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

Ans. (d) Influenza

**Explanation:** Influenza is a viral disease.

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

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

Ans. (c) Typhoid

**Explanation:** Typhoid does not need a vector for transmission. It is transmitted through contaminated food and water.

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

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

Ans. (d) Malaria

**Explanation:** Malaria is caused by protozoa.

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

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

Ans. (a) Malaria

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

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

**Ans. (c) Chewing tobacco**

**Explanation:** Common cold and chicken pox are acute diseases and hence do not have long term effects. Stress can be managed by making certain changes in lifestyle. But the effect of chewing tobacco remains for a long time even after giving it up.

**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

**Ans. (c) Sneezing**

**Explanation:** Diseases in other options are non-infectious diseases. Sneezing is one of the symptoms of common cold and many other respiratory diseases. All these diseases are infectious diseases. Hence, sneezing can spread infectious disease from one person to another.

**8. AIDS cannot be transmitted by**

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

**Ans. (b) hugs**

**Explanation:** Exchange of body fluids is necessary for transmission of AIDS. Exchange of body fluids is not possible through hugs. Hence, AIDS does not get transmitted by hugging.

**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

**Ans. (c) viruses have very few biochemical mechanisms of their own**

**Explanation:** All anti-bacterial medicines stop some or the other metabolism in bacteria and thus are effective in controlling further spread of bacteria. Since viruses have very few biochemical mechanisms of their own, it is highly difficult to make medicines to act against a particular metabolism. Hence, making anti-viral drugs is more difficult than making anti-bacterial medicines.

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

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

**Ans. (c) Leishmania**

**Explanation:** Leishmania is a protozoan which causes kala-azar.

**11. If you live in an 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

**Ans. (c) Air borne diseases**

**Explanation:** Living in enclosed spaces increases the risk of air-borne diseases.

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

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

**Ans. (d) Pneumonia**

**Explanation:** Pneumonia is transmitted through air.

**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

**Ans. (d) Living in a large and well-furnished house**

**Explanation:** If a large and well-furnished house is not clean; then it is not enough to ensure health. Conditions shown in other options are more important for being healthy.

**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

**Ans. (c) Peptic ulcers are caused by eating acidic food**

**Explanation:** Peptic ulcers are caused by a bacterium known 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
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(d) are not important insects

**Ans. (b)** are vectors for many diseases

**Explanation:** Diseases spread by mosquitoes are very dangerous; like malaria and dengue. Hence, it is important to prevent the breeding of mosquitoes.

**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**

**Ans. (c)** it creates immunity in the body

**Explanation:** Any vaccine helps in creating immunity in the body against a particular disease for which the vaccine is being made.

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

(a) air

(b) water

(c) food

(d) personal contact

**Ans. (b)** water

**Explanation:** Hepatitis is a viral disease and spreads through contaminated water. But hepatitis B is spread through exchange of body fluids.

**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

**Ans. (a)** animals carry the infecting agents from sick person to another healthy person

**Explanation:** Vectors are in fact live carries of germs of diseases.

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## Why Do We Fall Ill

### 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

**Ans.** (a) Viral fever, Flu  
(b) Elephantiasis, Tuberculosis (TB)  
(c) Small pox, Chicken pox  
(d) Diabetes, Goitre

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

**Ans.** (i) Sleeping sickness caused by Trypanosoma/ Malaria by plasmodium  
(ii) Kala-azar caused by Leishmania

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

**Ans.** (i) Helicobacter pylori  
(ii) Marshall and Warren.

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

**Ans.** Antibiotic is a chemical substance that kill bacteria, secreted by microorganisms which can kill the pathogens. Examples, Penicillin and Streptomycin.

**23. Fill in the blanks**

**(a)** Pneumonia is an example of \_\_\_\_\_ disease.

**Ans.** Communicable

**(b)** Many skin diseases are caused by \_\_\_\_\_.

**Ans.** Fungi

**(c)** Antibiotics commonly block biochemical pathways important for the growth of \_\_\_\_\_.

**Ans.** Bacteria

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

**Ans.** Vector

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

**(a)** Hepatitis targets \_\_\_\_\_.

**Ans.** Liver

**(b)** Fits or unconsciousness targets \_\_\_\_\_.

**Ans.** Brain

**(c)** Pneumonia targets \_\_\_\_\_.

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**Ans.** Lungs

**(d)** Fungal disease targets \_\_\_\_\_.

**Ans.** Skin

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

**Ans.** Edward Jenner was the first to discover vaccine. Vaccines can be used to prevent small pox and polio.

- 26. Fill in the blanks**

**(a)** \_\_\_\_\_ disease continues for many days and causes \_\_\_\_\_ on body.

**Ans.** Chronic, long term effect

**(b)** \_\_\_\_\_ disease continues for a few days and causes no longer term effect on body.

**Ans.** Acute

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

**Ans.** Health

**(d)** Common cold is \_\_\_\_\_ disease.

**Ans.** Infectious/ communicable

**(e)** Many skin diseases are caused by \_\_\_\_\_.

**Ans.** Fungi

- 27. Classify the following diseases as infectious or non-infectious.**

**(a)** AIDS

**Ans.** infectious

**(b)** Tuberculosis

**Ans.** infectious

**(c)** Cholera

**Ans.** infectious

**(d)** High blood pressure

**Ans.** non-infectious

**(e)** Heart disease

**Ans.** non-infectious

**(f)** Pneumonia

**Ans.** infectious

**(g)** Cancer

**Ans.** non-infectious

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

**Ans.** Bacteria and fungi

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

**Ans.** Malaria, dengue and chikungunya

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## Why Do We Fall Ill

### Long Answer Questions

**30. Explain giving reasons**

**(a)** Balanced diet is necessary for maintaining healthy body.

**Ans.** Food is necessary for the growth and development of the body. Balanced diet provides raw materials and energy in appropriate amount needed for the substances like protein, carbohydrates, fats, minerals etc which in turn are essential for the proper growth and functioning of the healthy body.

**(b)** Health of an organism depends upon the surrounding environmental conditions.

**Ans.** Health is a state of being well enough to function well physically, mentally and socially and these conditions depend upon the surrounding environmental conditions. eg., If there are unhygienic conditions in surrounding area, it is likely we might get infected or diseased.

**(c)** Our surrounding area should be free of stagnant water.

**Ans.** This is so because many water borne diseases and insect vectors flourish in stagnant water which cause diseases in human beings.

**(d)** Social harmony and good economic conditions are necessary for good health.

**Ans.** Human beings live in societies and different localities like villages or cities, which determines the social and physical environment and hence both are to be kept in harmony. Public cleanliness is important for individual health. For better living conditions lot of money is required. We need good food for healthy body and for this we have to earn more. For the treatment of diseases also, one has to be in good economic condition.

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

**Ans.** A condition in which the functioning of the body or a part of it changes adversely, it is called disease.

**Types of diseases:**

- Acute Diseases: Diseases which last for only very short period of time. Example, cough, cold, fever, etc.
- Chronic Diseases: Diseases which last for a long time and adversely affect the health of a person. Example, AIDS, encephalitis, etc.
- Infectious Diseases: Diseases which spread from an infected person to a healthy person. Example, malaria, typhoid, cholera, tuberculosis, etc.
- Non-infectious Diseases: Diseases which do not spread from an infected person to a healthy person. Example, Diabetes, arthritis, hypertension, heart disease, cancer etc.

Non-infectious diseases can be further divided into two categories:

(a) Lifestyle Diseases: Diabetes, hypertension, etc.

(b) Genetic Diseases: Haemophilia, sickle-cell anemia, etc.

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

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**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.

Example (i) Lesions on the skin are the symptoms of chickenpox.

Example (ii) Cough is the symptom of lung infection.

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

**Ans.** The immune system of our body is a kind of defense mechanism to fight against pathogenic microbes. It has cells that are specialized to kill infecting microbes and keep our body healthy.

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

**Ans.** Following precautions should be taken for prevention of disease.

(1) Maintaining hygienic conditions.

(2) Awareness about the disease and causal organism.

(3) Balanced diet.

(4) Regular medical check-up.

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

**Ans.** Some children have weak immune system which can happen because of various reasons. A child may not be getting balanced diet. A child may be living in congested and unhygienic locality. A child may not be getting clean drinking water. These children are at more risk of falling ill than others living in the same locality.

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

**Ans.** Antibiotics generally block the biosynthetic pathways and they block these pathways of the microbes/bacteria. However, viruses have very few biochemical mechanisms of their own and hence are unaffected by antibiotics.

**37. 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.

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

**Ans.** For a healthy person, it is necessary that

(i) The surrounding environment should be clean. Air and water borne diseases will not spread.

(ii) Personal hygiene prevents infectious diseases.

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(iii) Proper, sufficient nourishment and food is necessary for good immune system of our body.

(iv) Immunisation against severe diseases.

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

**Ans.** AIDS causing virus— HIV that comes into the body via, the sexual organs or any other means like blood transfusion will spread to lymph nodes all over the body. The virus damages the immune system of the body and due to this the body can no longer fight off many minor infections. Instead, every small cold can become pneumonia, or minor gut infection can become severe diarrhoea with blood loss. The effect of disease becomes very severe and complex, at times killing the person suffering from AIDS. Hence there is no specific disease symptoms for AIDS but it results in a complex diseases and symptoms. Therefore, it is known as a syndrome.

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