

BIOLOGY CLASS IX

Chapter-13 Why do we fall ill

1. Define health?

Health is a state of being well enough, to function well physically, mentally and socially.

2. What do we mean by disease? State some conditions which are essential for being disease free.

Disease means disturbed ease. In other words disease literally means being uncomfortable. Some conditions that are essential for being disease free are

- a) Hygienic environment
- b) Good social environment
- c) Stress free
- d) Good job opportunities
- e) Good economic conditions
- f) Social quality and harmonic relations

3. What is meant by symptoms of a disease? Give two examples.

Symptoms of a disease are things we feel as being wrong. For eg: We have a headache or cough

4. Differentiate between acute and chronic disease.

Acute disease	Chronic disease
Diseases which last for only very short period of time.	Diseases that last for a long time even as much as a lifetime.
Eg. Common cold, chicken pox	E.g., Diabetes. AIDS, Cancer, Asthma, Elephantiasis

5. Enumerate some causes of diseases.

Some causes of diseases are:

- a) Pathogens are disease causing microbes such as viruses, bacteria.
- b) Lack of good nourishment which leads to a poor immune system.
- c) The genetic constitution of an individual.
- d) Poverty and lack of public services which leads to poor hygiene and sanitation.

6. Explain the term 'Infectious Disease'. Name five infectious agents?

Diseases where microbes are the immediate causes are called infectious diseases.

Five infectious agents are: Bacteria, Viruses, Fungi, Protozoans and Worms.

7. Name the bacterium responsible for Peptic Ulcers. How can Peptic Ulcers be cured?

A bacterium named *Helicobacter pylori* was responsible for peptic ulcers. Peptic ulcers can be cured by a short period of treatment with antibiotics.

8. How do Antibiotics work? Name some antibiotics? Give reason why antibiotics do not work against viral infections?

Antibiotics block bio-chemical pathways important for bacteria. Many bacteria for eg make cell wall to protect themselves.

The antibiotic penicillin blocks the bacterial processes that build the cell wall. As a result the growing bacteria are unable to make cell wall and die easily.

Penicillin is an antibiotic.

Viruses do not use bio-chemical pathways at all, and that is the reason why antibiotics do not work against viral infections.

9. With an example, mention the ways in which microbes can move from infected person to healthy person?

The means of spread are:

a) Microbes can spread through air.

Eg: Pneumonia, Tuberculosis, Common cold

b) They can spread through food and water.

Eg. Cholera, Typhoid

c) Diseases can spread through physical contact.

Eg. AIDS, Syphilis.

d) Diseases can be transmitted by other animals called Vectors.

Eg. Dogs, Rats, Mosquitoes [They are also called intermediate hosts]

10. Differentiate between symptoms and signs of diseases.

Sl. No.	Symptoms	Signs
i)	They indicate the presence of disease.	They provide information about the presence of a particular disease.
ii)	Symptoms are collective indication of a number of diseases in a particular part or an organ.	They are distinct for different diseases.

11. Write the ways in which the AIDS virus can spread?

AIDS virus can spread through

a) Sexual contact.

b) Blood-to-blood contact with infected people.

c) From an infected mother to her baby during pregnancy or through breast feeding.

12. What is inflammation? Give some signs of inflammation?

An active immune system recruits many cells to the affected tissues to kill the disease causing microbes. This recruitment process is called inflammation.

Some signs of inflammation are:

a) Pain

b) Redness

c) Immobility

d) Swelling

e) Fever

13. Give two principles of treatment of a disease.

They are:

- a) To reduce the effects of the disease-symptom-directed treatment.
- b) To kill the cause of the disease.

14. Why is making anti-viral medicines harder than making anti-bacteria medicines?

OR

What is the limitation in making anti- viral medicines?

Making anti-viral medicines is harder than making anti-bacterial medicines because viruses have few biochemical mechanisms of their own. They enter our cells and use our machinery for their life processes. This means that there are relatively few virus-specific targets to aim at.

15. Why is prevention of diseases better than cure?

OR

What are the limitations in the approach to deal with infectious diseases?

- a) Once someone has a disease, their body functions are damaged and many never recover completely.
- b) Treatment will take time which means that someone suffering from a disease is likely to be bed-ridden for sometimes even if he can get proper treatment.
- c) The person suffering from an infectious disease can serve as the source from where the infection can spread to other people.

16. How do we prevent diseases?

a) General ways-

By maintaining proper hygiene and sanitation.

By having a nutritious and healthy diet in order to build a good immune system.

b) Specific ways-

By immunization.

17. What is the basis of the principle of immunization?

When the immune system first sees an infectious microbe, it responds against it and then remembers it specifically, so the next time that particular microbe, or its close relatives enter the body, the immune system responds with even greater vigour. This eliminates the infection even more quickly than the first time around. This is the basis of the principle of immunization.