

TOPIC- Questions - Answers (Intext)

1. What are antibiotics?

A medicine (such as penicillin or its derivatives) that inhibits the growth of or destroys microorganisms. Originally, an antibiotic was a substance produced by one microorganism that selectively inhibits the growth of another.

2. What precautions must be taken while taking antibiotics?

- **Antibiotics should not be taken** empty stomach.
- We **should take antibiotic only after** consulting a doctor as per the dose mentioned by her.
- We **should** complete the dose and course of **antibiotic** as advised by the doctor.
- We should strictly follow the timing and volume of the dose properly as per the doctor's advice.

3. How do antibiotics help us to fight diseases?

The antibiotics either kill bacteria or stop them from reproducing, allowing and supporting the body's natural defenses to eliminate the pathogens.

4. What are pathogens?

A pathogen or infectious agent is generally microorganisms and viruses or any other biological agent that cause disease or illness to its host.

5. How does a microorganism cause disease?

An infection occurs when bacteria, viruses, or other pathogens invade the body and begin to multiply. Disease occurs when the cells of our body are damaged from the invading pathogens. The disruption of cell processes causes symptoms that are specific to the pathogen.

6. What do you understand by food poisoning? How does food get poisoned?

The illness resulting from eating **food** or drinking water containing poisonous substances including bacteria, viruses, pesticides, or toxins. Symptoms generally begin within 2 to 6 hours and include abdominal cramping, diarrhea, fever, headache, nausea, vomiting, and weakness.

A food gets poisoned due to its contamination by harmful chemical excretions called toxins by the microorganisms which have multiplied within that food item. A food can get poisoned due to prolonged exposure of the food item in an opened area or touching the food with infected hands and then keeping it even in a closed container for a long time.

7. Name the microorganisms that can fix nitrogen in the soil? How is it helpful for the plants?

Bacteria like Rhizobium, Azotobacter and **blue green algae** like Anabaena and Nostoc can fix atmospheric nitrogen in the soil in form of nitrogenous compounds. The plants need nitrogen to synthesise protein in them.

8. Which groups of microorganisms predominantly cause a) Skin diseases b) Common Cough and Cold c) Food Poisoning.

- a) Skin diseases- Fungus, most effective in rainy season
- b) Common Cough and Cold- Rhinovirus, most effective in early spring and late autumn
- c) Food Poisoning- Summer season