📘 Chapter 6 – Life Processes (30 Important Q&A)

Basic Concepts

Q1. What are life processes?
Ans: Processes by which living organisms carry out functions essential for survival, like nutrition, respiration, transportation, and excretion.

Q2. Define nutrition.
Ans: The process of obtaining and utilizing food for growth, energy, and maintenance.

Q3. Name the two types of nutrition.
Ans: Autotrophic and Heterotrophic

Q4. Define autotrophic nutrition.
Ans: Organisms synthesize their own food from inorganic substances. Example: Green plants (photosynthesis).

Q5. Define heterotrophic nutrition.
Ans: Organisms depend on others for food. Example: Humans, animals.

Nutrition in Humans

Q6. Name the main organs of the human digestive system.
Ans: Mouth, esophagus, stomach, small intestine, large intestine, liver, pancreas, gall bladder

Q7. Role of saliva:
Ans: Contains salivary amylase which starts starch digestion.

Q8. Role of stomach:
Ans: Protein digestion by pepsin; also kills germs with acidic gastric juice.

Q9. Role of small intestine:
Ans: Completes digestion; absorbs nutrients through villi into blood.

Q10. Role of liver:
Ans: Produces bile which emulsifies fats; detoxifies harmful substances.

Nutrition in Plants

Q11. Photosynthesis definition:
Ans: Process by which green plants synthesize food using sunlight, CO_2, and water.

Q12. Photosynthesis equation:

Ans: $6CO_2 + 6H_2O + \text{sunlight} \rightarrow C_6H_{12}O_6 + 6O_2$

Q13. Site of photosynthesis:

Ans: Chloroplasts in green leaves.

Q14. Role of chlorophyll:

Ans: Captures light energy for photosynthesis.

Q15. Factors affecting photosynthesis:

Ans: Light intensity, carbon dioxide concentration, water availability, temperature.

Respiration

Q16. Define respiration.

Ans: Process of breaking down food to release energy.

Q17. Types of respiration:

Ans: Aerobic (with oxygen) and Anaerobic (without oxygen)

Q18. Aerobic respiration equation:

Ans: $C_6H_{12}O_6 + 6O_2 \rightarrow 6CO_2 + 6H_2O + \text{energy}$

Q19. Anaerobic respiration in humans equation:

Ans: $C_6H_{12}O_6 \rightarrow 2C_3H_6O_3 + \text{energy}$

Q20. Anaerobic respiration in yeast equation:

Ans: $C_6H_{12}O_6 \rightarrow 2C_2H_5OH + 2CO_2 + \text{energy}$

Transportation in Humans

Q21. Main transport system in humans:

Ans: Circulatory system

Q22. Components of blood:

Ans: Plasma, red blood cells, white blood cells, platelets

Q23. Function of red blood cells:

Ans: Transport oxygen using hemoglobin

Q24. Function of white blood cells:

Ans: Fight infections

Q25. Function of platelets:

Ans: Help in blood clotting

Excretion

Q26. Define excretion:
Ans: Process of removing metabolic wastes from the body

Q27. Main excretory organs in humans:
Ans: Kidneys, lungs, skin, liver

Q28. Function of kidneys:
Ans: Filter blood to remove urea, salts, and excess water; forms urine

Q29. Function of lungs in excretion:
Ans: Remove carbon dioxide and water vapor

Q30. Function of skin in excretion:
Ans: Remove excess water, salts, and urea through sweat