

Section A: Towards Green Energy (15 Marks)

Q1. Multiple Choice Questions (5 Marks)

1. The most clean and renewable source of energy is:
(a) Fossil fuels (b) Nuclear energy (c) Solar energy (d) Hydroelectric energy
2. The process of conversion of solar energy into electrical energy is called:
(a) Photovoltaic effect (b) Photosynthesis (c) Photolysis (d) Photorespiration
3. Wind energy is a form of:
(a) Kinetic energy (b) Potential energy (c) Nuclear energy (d) Chemical energy
4. Biogas is produced by the process of:
(a) Aerobic respiration (b) Anaerobic respiration (c) Photosynthesis (d) Chemosynthesis
5. The major component of biogas is:
(a) Methane (b) Carbon dioxide (c) Hydrogen sulfide (d) Oxygen

Q2. Short Answer Questions (5 Marks)

1. Explain the working principle of a solar cell.
2. Describe the advantages and disadvantages of using fossil fuels.
3. What is the importance of energy conservation?

Q3. Long Answer Question (5 Marks)

Discuss the various renewable energy sources and their potential in India.

Section B: Animal Classification (15 Marks)

Q1. Multiple Choice Questions (5 Marks)

1. The scientific name of human beings is:
(a) Homo sapiens (b) Panthera leo (c) Canis familiaris (d) Rattus rattus
2. Animals that give birth to young ones are called:
(a) Oviparous (b) Viviparous (c) Hermaphrodite (d) Parthenogenetic
3. Animals that feed on plants are called:
(a) Carnivores (b) Herbivores (c) Omnivores (d) Decomposers
4. The phylum that includes vertebrates is:
(a) Porifera (b) Cnidaria (c) Chordata (d) Arthropoda
5. The process of transformation of larva into adult is called:
(a) Metamorphosis (b) Regeneration (c) Parthenogenesis (d) Asexual reproduction

Q2. Short Answer Questions (5 Marks)

1. Explain the binomial nomenclature system.
2. Differentiate between vertebrates and invertebrates.
3. Describe the characteristics of phylum Arthropoda.

Q3. Long Answer Question (5 Marks)

Discuss the classification of animals based on the presence or absence of a backbone. Give examples of different phyla.