

Kerala Class 8 Basic Science Second Term (Christmas Exam) 2025-26

Model Question Paper

Answer key

PART I: PHYSICS (20 marks)

Section – A ($2 \times 1 = 2$)

1. b) **Electroscope**
2. **Permanent Magnet**

Section – B ($6 \times 2 = 12$)

3. a) **Concave mirror** b) **Focus (F) or Principal focus**
4. a) **Static electricity** b) The charge is lost / neutralised / discharged to earth (earthing)
5. Magnetic substances: Iron, Nickel Non-magnetic substances: Plastic, Rubber
6. a) **Convex mirror** b) Forms **erect, virtual and diminished** image / wide field of view
7. (A) a) **Electromagnet** b) Increase number of turns of coil / increase current / insert soft iron core
OR
(B) a) **North-South direction** b) **Earth acts as a huge magnet** / Earth's magnetism
8. (A) a) Draw reflected ray following **angle of incidence = angle of reflection**
b) **Laws of reflection**
OR
(B) a) **Sharp pointed tip / needle**
b) Charge flows to earth safely / prevents lightning from striking the building

Section – C ($2 \times 3 = 6$)

9. a) **Between pole (P) and focus (F) / Between C and F**
b) **At infinity** c) Used in torches, vehicle headlights, shaving mirrors, dentist mirrors, solar cookers (any one)
10. (A) When a bar magnet is brought near iron pins, magnetic field induces opposite polarity in the nearest end of pins → pins get attracted → form a chain (magnetic induction)
OR
(B) Correct matching:
 1. Lodestone → b. Natural Magnet
 2. Capacitor → a. Device to store charge
 3. Alnico → c. Artificial Magnet
 - 4.

PART II: CHEMISTRY (20 marks)

Section – A ($2 \times 1 = 2$)

1. b) **Mercury**
2. c) **Acidic**

Section – B ($6 \times 2 = 12$)

3. a) Presence of salt and moisture in sea air accelerates rusting
b) Sodium reacts vigorously with oxygen and moisture in air
4. a) **Temporary hardness** (or Carbonate hardness)
b) **Boiling** the water
5. $\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$ Salt formed: **Magnesium chloride**
6. a) Water dissolves many substances (salts, gases, etc.)
b) Pollutants, sewage, factory waste, fertilizers dissolve in river water \rightarrow cause water pollution
7. (A) a) **Lactic acid**
b) **Hydrogen gas**

OR

- (B) a) Iron, Chromium, Nickel (and Carbon)
b) Alloys are stronger, more corrosion resistant than pure iron
 8. (A) a) **pH = 7** b) **Lime / Slaked lime / Quick lime / Calcium hydroxide**
- OR**
- (B) a) Force of attraction between molecules on the surface of liquid
b) Surface tension supports their weight / forms a thin elastic film on water surface

Section – C ($2 \times 3 = 6$)

9. a) **Hydrogen** b) **2 : 1** (by volume) c) Pure water is a bad conductor \rightarrow acid makes it a good conductor / ionises water
 10. (A) a) **Solution A** (turns pink with phenolphthalein) b) **Neutralisation reaction** c)
 $\text{NaOH} + \text{HCl} \rightarrow \text{NaCl} + \text{H}_2\text{O}$
- OR**
- (B) a) **H_2SO_4**
b) **SO_2** (Sulphur dioxide) c) Acid rain damages buildings, monuments, soil, water bodies, kills aquatic life, affects plants

PART III: BIOLOGY (20 marks)

Section – A ($2 \times 1 = 2$)

1. b) **Robert H. Whittaker**
2. **Chloroplast** (not present in animal cells)

Section – B ($6 \times 2 = 12$)

3. Prokaryotes: Bacteria, Cyanobacteria Eukaryotes: Amoeba, Human
4. a) **Frog** b) **Trophic level**
5. Plant cell: Has cell wall, large permanent vacuole Animal cell: No cell wall, small/temporary/absent vacuole
6. a) **Carolus Linnaeus**
b) **Genus + Species** (e.g., Homo sapiens)
7. **(A)** Correct matching:
 - i. Xylem → b. Transport of water and minerals
 - ii. Phloem → a. Transport of food
 - iii. Collenchyma → c. Flexibility and support
 - iv. Sclerenchyma → d. Strength and support (Dead cells)

OR

(B) a) **Mitochondria** b) **Endoplasmic reticulum**

8. **(A)** a) Conservation of organisms in their natural habitat b) Zoological parks, botanical gardens, seed banks, gene banks (any one)

OR

(B) a) **Parasitism** b) **Mutualism**

Section – C (2 × 3 = 6)

9. a) **Nucleus** b) Chromatin condenses to form **chromosomes** c) **Nucleoplasm**
10. **(A)** Six Kingdom Classification: Archaea → Bacteria → Protista → Fungi → Plantae → Animalia

OR(B)

- a) Decomposers break down dead organisms → recycle nutrients → maintain fertility of soil
- b) Food web (any correct interconnection): Grass → Grasshopper → Frog → Snake → Eagle Grass → Rabbit → Eagle Grasshopper → Frog → Eagle