



कुल मुद्रित पृष्ठों की संख्या / Total No. of printed pages: \_\_

## परमाणु ऊर्जा शिक्षण संस्था

**Atomic Energy Education Society**

**आवधिक परीक्षण / Periodic Test 1 (2025-26)**

**विद्यालय/School: AECS      केंद्र/Centre: MYSURU**

**कक्षा/Class: X**

**विषय/Subject: Science**

**अंक/Marks: 40**

**दिया गया पाठ्यक्रम/ Portion covered: Light (upto Refraction of Light) / Chapter 1 and 2 / Life Processes**

विद्यार्थी का नाम / Name of the student: \_\_\_\_\_

अनुक्रमांक/Roll No. \_\_\_\_\_

कक्षा/अनुभाग

दिनांक /Date: \_\_\_\_\_

### Question Bank

#### **General Instructions:**

1. This question paper consists of two parts A and B.
2. Section 'A' has 20 MCQs and each question carries 1 mark.
3. Section "B-1" has 5 questions and each question carries 2 marks.
4. Section 'B-2' has 2 questions and each question carries 3 marks.
5. Section 'B-3' has 1 question and it carries 4 marks.
6. All the questions are compulsory.

#### **SECTION-A**

**(1x20= 20 MARKS)**

**1. In amoeba, food is digested in the:**

(a) food vacuole (b) mitochondria (c) pseudopodia (d) chloroplast

**2. The opening and closing of the stomatal pore depends upon**

(a) Oxygen (b) temperature (c) water in the guard cells (d) concentration of CO<sub>2</sub>

**3. The contraction and expansion movement of the walls of the food pipe is called:**

(a) translocation (b) transpiration (c) peristaltic movement (d) digestion

**4. During photosynthesis ..... undergoes oxidation**

a) carbondioxide b) Oxygen (c) water (d) nitrogen

**5. Digestion of .....,..... begins in the buccal cavity**

(a) protein (b) carbohydrates (c) nucleic (d) lipids

**6. Which of the following is a displacement reaction?**

a)  $\text{NaCl} + \text{AgNO}_3 \rightarrow \text{NaNO}_3 + \text{AgCl}$

b)  $\text{CuSO}_4 + \text{Zn} \rightarrow \text{ZnSO}_4 + \text{Cu}$

c)  $\text{H}_2 + \text{Cl}_2 \rightarrow 2\text{HCl}$

d)  $\text{CaO} + \text{H}_2\text{O} \rightarrow \text{Ca(OH)}_2$

**7. Which of the following statements is true for a chemical reaction?**

a) Total mass remains constant

b) Only energy is conserved c) Atoms are destroyed d) Mass increases

**8. The reaction:**

$2\text{Fe} + 3\text{Cl}_2 \rightarrow 2\text{FeCl}_3$  is a/an –

a) Displacement reaction b) Combination reaction c) Decomposition reaction d) Redox reaction

**9. Barium chloride on reacting with ammonium sulphate forms**

barium sulphate and ammonium chloride. Which of the following

correctly represents the type of the reaction involved?

(i) Displacement reaction (ii) Precipitation reaction (iii) Combination reaction

(iv) Double displacement reaction

**10. Electrolysis of water is a decomposition reaction. The mole ratio of**

hydrogen and oxygen gases liberated during electrolysis of water is

(a) 1:1 (b) 2:1 (c) 4:1 (d) 1:2

**11. Which gas is evolved when dilute hydrochloric acid reacts with zinc metal?**

a) Oxygen b) Hydrogen c) Chlorine d) Nitrogen

**12. What is the color change when copper powder is heated?**

a) Brown to black b) Black to brown c) Green to yellow d) Blue to green

**13. The laws of reflection hold true for :**

a. Plane mirrors only

b. Concave mirrors only

c. Convex mirrors only

d. All reflecting surfaces

**14. When an object is kept within the focus of a concave mirror, an enlarged image is formed behind the mirror. This image is:**

a. Real

b. Inverted

c. Virtual and erect

d. Virtual and inverted

**15. A real image is formed by the light rays after reflection or refraction when they:**

a. Actually meet or intersect each other

b. Actually diverge from a point

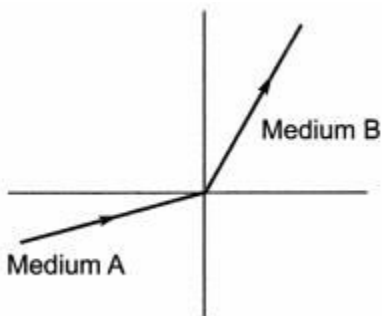
c. Appear to meet when produced in the backward direction

None of these

16. Under which of the following conditions a concave mirror can form an image larger than the actual object?

- (a) When the object is kept at a distance equal to its radius of curvature
- (b) When object is kept at a distance less than its focal length
- (c) When object is placed between the focus and centre of curvature
- (d) When object is kept at a distance greater than its radius of curvature

17. A light ray enters from medium A to medium B as shown in figure. The refractive index of medium B relative to A will be



- (a) greater than unity
- (b) less than unity
- (c) equal to unity
- (d) zero

18. Magnification produced by a rear view mirror fitted in vehicles

- (a) is less than one
- (b) is more than one
- (c) is equal to one
- (d) can be more than or less than one depending upon the position of the object in front of it.

19. In torches, search lights and headlights of vehicles the bulb is placed

- (a) between the pole and the focus of the reflector
- (b) very near to the focus of the reflector
- (c) between the focus and centre of curvature of the reflector
- (d) at the centre of curvature of the reflector

20. You are given water, diamond, glycerine and kerosene. In which of these media a ray of light incident obliquely at same angle would bend the most?

- (a) Kerosene
- (b) Water
- (c) Diamond
- (d) Glycerine

#### SECTION-B-1

Answer the following questions in one or two sentences.

(2x5=10 Marks)

21. What is saprophytic nutrition? Give an example.

22. Why digestion in humans is considered to be holozoic?

23. What is rancidity? How can it be prevented?

24. Write a balanced chemical equation for the following reaction and identify the type of reaction:

**Zinc reacts with hydrochloric acid to form zinc chloride and hydrogen gas.**

25. Write the law of reflection with the help of a neat and labeled diagram.

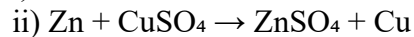
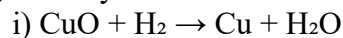
### SECTION-B-2

**Answer the following questions in three to four sentences. (3x2=6 Marks)**

26. A 10 mm long office pin is placed vertically in front of a concave mirror. A 5 mm long image of the pin is formed at 30 cm in front of the mirror. Find the focal length of this mirror.

27. a) Define oxidation and reduction in terms of oxygen and hydrogen.

b) Identify the oxidized and reduced substances in the following reactions:



### SECTION-B-3

**Answer the following questions in four to five sentences. (4x1=4 Marks)**

28. Explain the structure and function of the human digestive system with the help of neat labeled diagrams.

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