2025_26_PB_II

EDUTECH ACADEMY
NURTURING THE FUTURE....

SET : EAS_A

— SCHOOL SECTION —

STD : X SSC

PRELIM EXAM - 2

TIME : 2:00 Hrs

SUB : SCIENCE I

DATE : 22nd January, 2026

MM : 40

1. It is necessary to solve all the questions.
2. Draw neat and labelled diagrams wherever necessary.
3. Start every new main question on separate page.
4. Figures on the right indicate marks.
5. For each Multiple Choice Question (1.B), ONLY first answer will be considered.
6. Write answer of each MCQ with option number.
Eg. i) a……. ii) c……

Q.1 (A) Choose the proper alternative and fill in the blanks: **5**

(1) Alkaline earth metals have valency 2. This means that their position in the modern periodic table is in _____.*
(a) Group 2 (b) Group 16
(c) Period 2 (d) d-block

(2) The _____ of a convex lens is positive thus the spectacles used to correct farsightedness has positive power.
(a) focal length (b) principle focus
(c) principle axis (d) radius

(3) If the height of the satellite orbit above the earth's surface is in between 180 km and 2000 km, the orbits are called _____.
(a) medium earth Orbit (b) ultra high earth Orbit
(c) low earth Orbit (d) high earth Orbit

(4) Ethanoic acid is commonly known as _____.
(a) citric acid (b) acetic acid
(c) malonyl acid (d) antacid

(5) The world has become a global village due to _____.
(a) agriculture (b) space mission
(c) industries (d) global warming

(B) Attempt the following: **5**

(1) Find the odd one out: **1**

Light, sound, heat, laws of planetary motion

(2) State 'True' or 'False', if 'False' correct it: **1**

The number of shells increases down the group.

(3) Write the correlated terms: **1**

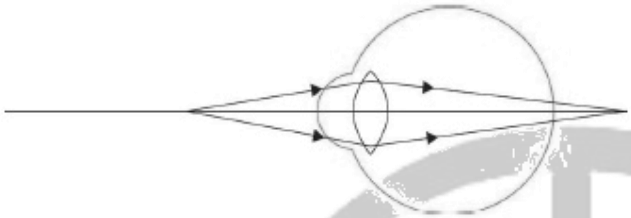
Solar eclipse : Apparent size of object :: Motion pictures : _____

(4) Name the following: **1**

Write the IUPAC names of the following structural formulae: CH_3-CH_2-COOH*

(5) Answer the following in one line: **1**

Name the defect shown in the diagram.



Q.2 (A) Give reasons:(Any Two) **4**

(1) Atomic radius goes on increasing down a group.

(2) If a feather and stone are released from the top of a building simultaneously, the stone reaches the ground earlier than the feather.

(3) Violet light is deviated most and red light is deviated the least on passing through the prism.

(B) Answer the following:(Any Three) **6**

(1) Mahendra and Virat are sitting at a distance of 1 metre from each other. Their masses are 75 kg and 80 kg respectively. Calculate the gravitational force due to the earth on Mahendra.*

(2) Explain the difference :*
AC generator and DC generator.

(3) What is meant by a chemical bond? What are the two important types of chemical bonds?*

(4) You know that as we go higher than the sea level, the boiling point of water decreases what would be effect on the melting point of solid?*

(5) Complete the following reaction :

$$C_{12}H_{22}O_{11} \xrightarrow{\text{heat}} \ldots\ldots\ldots\ldots + \ldots\ldots\ldots\ldots$$

Q.3 Answer the following:(Any Five) **15**

(1) Balance the following equation stepwise.

$$NaOH + H_2SO_4 \rightarrow Na_2SO_4 + H_2O$$

(2) What is an artificial satellite ? Name any two types of artificial satellite and state their functions.

(3) Distinguish between Nearsightedness and Farsightedness*

(4) The metals in the middle of the reactivity series such as iron, zinc, lead, copper are moderately reactive. Usually they occur in the form of their sulphide salts or carbonate. It is easier to obtain metals from their oxides rather than sulphides or carbonates. Therefore, the sulphide ores are strongly heated in air to transform them into oxides. This process is called roasting. Carbonate ores are strongly heated in a limited supply of air to transform them into oxides. This process is called calcination. The zinc oxide so obtained is reduced to zinc by using suitable reductant such as carbon. Apart from carbon, reactive metals such as sodium, calcium, aluminium are also used as reducing agent for the reduction of metal oxide to obtain the metal. This is because these metals displace a moderately reactive metal from its compound.

1. Define roasting.
2. What is calcination?
3. Name any two reducing agents.

(5) In the chlorination, substitution reaction of propane two isomeric products containing one chlorine atom are obtained. Draw their structural formulae and give their IUPAC names.*

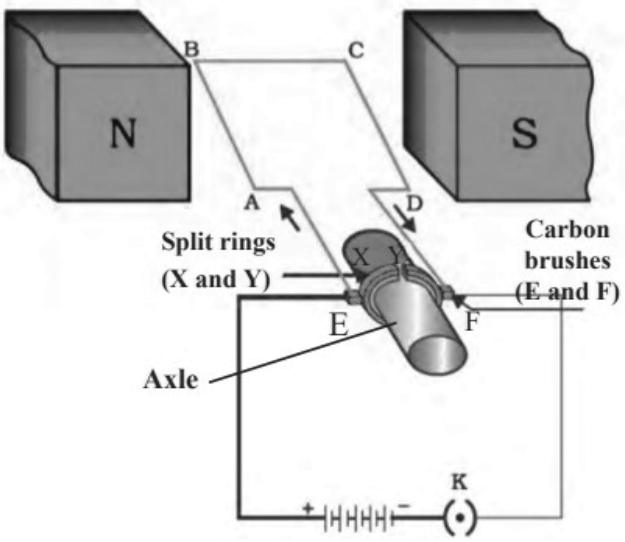
(6) Explain the term reactant and product giving examples.*

(7) A copper sphere of 100 g mass is heated to raise its temperature to 100° C and is released in water of mass 195 g and temperature 20° C in a copper calorimeter. If the mass of calorimeter is 50 g, what will be the maximum temperature of water?*

(8) What are the physical properties of metals and non metals?*

Q.4 Answer the following:(Any One) **5**

(1) Observe the following diagram and answer the questions given below:



a. Identify the above diagram.

b. Write the principle on which the above appliance works.

c. Write the working of the above appliance.

d. Write the use of the above appliance.

(2) The observation made by Swarali while doing the experiment are given below. Based on these write answers to the questions:

Swarali found that the light ray travelling from the denser medium to rarer medium goes away from the normal. If the angle of incidence (i) is raised by Swarali, the angle of refraction (r) went on increasing. However after certain value of the angle of incidence the light ray is seen to return back into the denser medium.

Questions:

(i) What is the specific value of ∠i called?

(ii) What is the process of reflection of incident ray into denser medium called?

(iii) Draw the diagrams of three observations made by Swarali.

....All The Best....