



S.NO	SECTION-A
1	The focal length of four convex lenses P, Q, R and S are 20cm, 15cm, 5cm and 10cm, respectively. The lens having greatest power is: (a) P (b) Q (c) R (d) S
2	Whatever be the position of the object, the image formed by a mirror is virtual, erect and smaller than the object. The mirror then must be: (a) plane (b) concave (c) convex (d) either concave or convex
3	Keeping the potential difference constant, the resistance of a circuit is halved. The current will become: (a) one-fourth (b) four times (c) half (d) double
4	A sharp image of a distant object is obtained on a screen by using a convex lens. In order to determine the focal length of the lens, you need to measure the distance between the: (a) lens and the object (b) lens and the screen (c) object and the screen (d) lens and the screen and also between object and the screen.
5	A non-metal which is lustrous and sublimable is: (a) Carbon (b) Bromine (c) Iodine (d) Sulphur
6	Four solutions A, B, C and D when tested with universal indicator showed pH as 4, 1, 11 and 9 respectively. The solution which is strongly acidic is: (a) B (b) C (c) A (d) D
7	The gas collected at the cathode during the electrolysis of water: (a) Oxygen (b) Hydrogen (c) Hydrogen & Oxygen (d) None of these
8	To demonstrate a displacement reaction the correct experimental set up is : (a) Cu turnings in FeSO_4 solution (b) Fe in FeSO_4 solution (c) Fe nails in CuSO_4 solution (d) all of these
9	The growth of pollen tubes towards ovules is due to a. Hydrotropism b. Chemotropism c. Geotropism d. Phototropism
10	What prevents back flow of blood inside the heart during contraction a. Valves in heart b. Thick muscular walls of ventricles c. Thin walls of atria d. All of the above
11	Mention the two major events that occur during binary fission in amoeba
12	1. Where do you find more number of stomata? 2. What is the importance of stomata in a leaf? (any one)
13	What is synapse?
14	The questions below consist of statement of an Assertion and Reason. Use the following key to choose appropriate answer:

	<p>(A) If both assertion and reason are CORRECT and reason is the CORRECT explanation of the assertion.</p> <p>(B) If both assertion and reason are CORRECT, but reason is NOT THE CORRECT explanation of the assertion.</p> <p>(C) If assertion is CORRECT, but reason is INCORRECT.</p> <p>(D) If assertion is INCORRECT, but reason is CORRECT</p> <p>(E) If both assertion and reason are INCORRECT</p> <p>Assertion: Human body produces highly toxic substances which if not eliminated may cause death.</p> <p>Reason: Excretory substance removes nitrogenous waste from the body.</p>
15	Give the position, size and nature of image formed by a convex lens when the object is placed at infinity.
16	The power of a lens is +0.2D. Calculate its focal length.
17	Will current flow more easily through a thick wire or a thin wire of the same material when connected to the same source? Give reason for your answer
18	What will be the nature of the solution formed when calcium oxide is dissolved in water?
19	What is Rancidity?
20	Ionic compounds conduct electricity only in the molten state or in the aqueous state. Give reason.
SECTION-B	
21	<p>(a) List four properties of the image formed by a concave mirror, when object is placed between focus and pole of the mirror.</p> <p>(b) The angle between incident ray and reflected ray is 60°. What is the angle of Incidence?</p> <p style="text-align: center;">(OR)</p> <p>(a) The linear magnification produced by a spherical mirror is +3. Analyze this value and state the (i) type of mirror and (ii) position of the object with respect to the pole of the mirror.</p> <p>(b) The angle between incident ray and reflected ray is 80°. What is the angle of incidence?</p>
22	Draw a ray diagram to show the refraction of light through a glass prism. On this diagram, mark (i) incident ray (ii) emergent ray, and (iii) angle of deviation.
23	<p>(a) Define resistivity.</p> <p>(b) Write an expression for the resistivity of a substance.</p> <p>(c) Name two factors on which the resistivity of a substance depends.</p> <p style="text-align: center;">(OR)</p> <p>How does the resistance of a wire change when:</p> <p>(a) Its length is tripled?</p> <p>(b) Its diameter is tripled?</p> <p>(c) Its material is changed to one whose resistivity is three times?</p>
24	A compound A is used in fire extinguishers as an antacid and small it's small amount is also used in making bakery items. Identify the compound A and also explain the reasons for above mentioned uses of the compound A.

	<p style="text-align: center;">OR</p> <p>(1) Write any two differences between Roasting and Calcination. (2) Why Ionic compounds have high Melting point?</p>
25	<p>(1) Write the chemical name and formula of bleaching powder. (2) Write the chemical equation to represent the preparation of the above compound.</p>
26	<p>A metal A which is used in thermit process, when heated with oxygen gives an oxide B which is amphoteric in nature. Identify A and B .Write down the reactions of oxide B with HCl and NaOH.</p> <p style="text-align: center;">OR</p> <p>A metal that exists as a liquid at room temperature is obtained by heating its sulphide in the presence of air. Identify the metal and its ore and give the reaction involved.</p>
27	<p>State any three differences between Sexual and Asexual reproduction.</p> <p style="text-align: center;">OR</p> <p>What happens when</p> <ol style="list-style-type: none"> Accidently Planaria gets cut into many pieces? Bryophyllum leaf falls on the soil? On maturation sporangia of Rhizopus bursts?
28	<p>List the role of each of the following in our digestive system</p> <ol style="list-style-type: none"> Peristalsis Hydrochloric acid Mucus
29	<p>Name the plant hormone that promotes growth. How do these hormones bring about phototropism in the shoots of a plant?</p>
30	<ol style="list-style-type: none"> What is lymph? How is composition of lymph different from blood plasma? Write any two functions of lymphatic system
	SECTION-C
31	<p>(a) What is short – sightedness? (b) State the two causes of short – sightedness (or myopia). (c) With the help of a ray diagrams, show: (i) the eye defect of short-sightedness (ii) Correction of short-sightedness by using a lens.</p> <p style="text-align: center;">(OR)</p> <p>(a) What is long – sightedness? (b) State the two causes of long – sightedness (or hypermetropia). (c) With the help of a ray diagrams, show: (i) the eye defect of long-sightedness (ii) Correction of long-sightedness by using a lens</p>
32	<p>(a) What is the ratio of potential difference and current known as? (b) What is Ohm’s law? Explain how it is used to define the unit of resistance. (c) When a 12V battery is connected across an unknown resistor, there is a current of 2.5mA in the circuit. Calculate the value of the resistance of the resistor.</p>
33	<p>(a) Define an Alloy.</p>

	<p>(b) What are the constituents of Bronze?</p> <p>(c) Which property of solder makes it suitable for welding electrical wires?</p> <p>(d) Show the formation of CaO with the help of electron dot diagram.</p> <p style="text-align: center;">OR</p> <p>During extraction of metals, electro refining is used to obtain pure metals.</p> <p>(1) Which material will be used as anode and cathode for refining?</p> <p>(2) Where do we get the pure metal after passing electric current through the electrolyte?</p> <p>(3) What is aqua regia?</p> <p>(4) What are ores?</p>
34	<p>(a) What is Neutralisation reaction? Write any two applications of the reaction.</p> <p>(b) Write the chemical name and formula of the following:</p> <p>(1) Basic substance formed by chlor-alkali process.</p> <p>(2) A salt formed by the combination of Carbonic acid and Sodium hydroxide.</p>
35	<p>1. What are enzymes? Name any one enzyme of our digestive system and write its function</p> <p>2. State the role of the following in human digestive system :</p> <p>(i) Digestive enzymes (ii) Hydrochloric acid (iii) Villi</p> <p style="text-align: center;">OR</p> <p>1. Draw a neat diagram of excretory system of human beings and label on it:</p> <p>(i) kidney (ii) Urinary bladder (iii) Ureters (iv) Urethra.</p> <p>2. List any two characteristics of lungs which make it an efficient respiratory surface.</p>
36	<p>1. Draw a well labeled diagram of a neuron (Four parts)</p> <p>2. Name the part where</p> <p>a. The information is acquired.</p> <p>b. Through which information travels as an electrical impulse</p>
End of the Question Paper	