



QUESTION BANK SCIENCE – CLASS X (2019 – 20)

S.NO	SECTION-A
1	In order to obtain a magnification of, -2 with a concave mirror, the object should be placed: (a) between pole and focus (b) between focus and Centre of curvature (c) at the Centre of curvature (d) beyond the Centre of curvature
2	A ray of light passes from a medium X to another medium Y. No refraction of light occurs if the ray of light hits the boundary of medium Y at an angle of : (a) 0° (b) 45° (c) 90° (d) 120°
3	Keeping the potential difference constant, the resistance of a circuit is doubled. The current will become : (a) double (b) half (c) one-fourth (d) four times
4	A concave mirror gives real, inverted and same size image if the object is placed (a) At F (b) At infinity (c) At C (d). Beyond C
5	The amphoteric oxide from the following is: (a) Na_2O (b) ZnO (c) SO_2 (d) MgO
6	The reducing agent in the following reaction : $2\text{H}_2\text{S} + \text{SO}_2 \rightarrow 2 \text{H}_2\text{O} + 3\text{S}$ (a) SO_2 (b) H_2S (c) H_2O (d) S
7	The salt used in black and white photography: (a) NaBr (b) KBr (c) AgNO_3 (d) AgCl
8	A teacher gave two test tubes: one containing water and the other containing NaOH solution to the students and asked them to identify the test tube containing NaOH solution. Which of the following can be used for identifying the test tube containing NaOH solution? Blue litmus (b) Red litmus (c) Sodium carbonate solution (d) dil : HCl
9	In which of the following groups of organisms, food material is broken down outside the body and absorbed? a. Mushroom, Green plants, Amoeba b. Yeast, Mushroom, Bread mould c. Paramecium, Amoeba, Cuscuta d. Cuscuta, lice, Tape worm
10	Reproduction is essential in living organism in order to a. Keep the individual organism alive b. Fulfill their energy requirement c. Maintain growth d. Continue the species generation after generation
11	1. Name the stain used for preparing the slide of stomata. 2. Where do you find more number of stomata in a plant?
12	A student is to conduct an experiment to show CO_2 is released during respiration. List two precautions that he/she must take for obtaining correct observation
13	Name two components of central nervous system in humans.
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: Amoeba reproduces by Binary fission Reason: All unicellular organisms reproduce asexually</p>
15	A student wants to project the image of a candle flame on the walls of school laboratory by using a lens. Which type of lens should he use and why?
16	In a human eye, name the following parts: (a) A thin membrane which allows light to enter the eye. (b) The muscles which help in changing the focal length of eye lens.
17	How is a voltmeter connected in the circuit to measure the potential difference between two points? Give reason.
18	Why does Zinc reacts with sulphuric acid to give hydrogen gas but copper does not?
19	What is rancidity?
20	Ionic compounds are generally hard. Give reason.
SECTION-B	
21	<p>(a) List four specific characteristics of the images formed by convex mirrors.</p> <p>(b) In what condition, the image formed by a concave mirror is virtual?</p> <p style="text-align: center;">(OR)</p> <p>(a) The linear magnification produced by a spherical mirror is $+1/3$. Analyse 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) What is the position of the object placed on the side of reflecting surface of a concave mirror of focal length 15cm if the image is formed at the distance of 30cm from the mirror?</p>
22	Draw a ray diagram to show the refraction of light through a rectangular glass slab. On this diagram, mark (i) incident ray (ii) emergent ray, and (iii) lateral displacement.
23	<p>How does the resistance of a conductor depend on:</p> <p>(a) Length of the conductor?</p> <p>(b) Area of cross-section of the conductor?</p> <p>(c) Temperature of the conductor?</p> <p style="text-align: center;">(OR)</p> <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>
24	<p>A compound which is prepared from gypsum has the property of hardening when mixed with a proper quantity of water. Identify the compound. Write the chemical equation for its preparation. For what purpose is it used in the hospitals?</p> <p style="text-align: center;">OR</p> <p>(1) Write any two differences between Roasting and Calcination.</p> <p>What are ionic compounds?</p>

25	<p>(1) Write the formula and chemical name of bleaching powder. (2) Write the equation to represent the preparation of the above salt. (3) State for what purpose is bleaching powder used in water treatment plants.</p>
26	<p>(1) What is the action of granulated Zinc on diluted : H_2SO_4? (2) Show the formation of MgO with the help of electron dot diagram.</p> <p style="text-align: center;">OR</p> <p>(1) What are strong and weak acids? (2) What is the relationship between pH and Hydrogen ion concentration?</p>
27	<p>1. What process in plant is known as Transpiration? 2. State any two differences between Artery and Vein.</p> <p style="text-align: center;">OR</p> <p>1. Name the respiratory pigment in human beings. 2. List any three characteristics of lungs which makes it an efficient respiratory surface. 3. State any one difference between Aerobic and Anaerobic respiration.</p>
28	<p>1. What is the difference between self pollination and cross pollination? 2. Write any two unisexual flowers</p>
29	<p>1. Name the mechanism by which amount of hormone in the blood is regulated 2. An old man is advised by his doctor to take less sugar in his diet. Name the disease from which the man is suffering. Mention the hormone due to imbalance of which he is suffering from this disease. Which endocrine gland secrete this hormone? 3. How is brain protected from injury and shock?</p>
30	<p>1. What is the role of saliva in digestion of food? 2. Name the nitrogenous waste present in urine. What is the basic filtration unit of kidney called? 3. How is the amount of urine produced regulated?</p>
SECTION-C	
31	<p>(a) What is spectrum? (b) When we place a glass prism in the path of a narrow beam of white light, a Spectrum is obtained. What happens when a second identical prism is placed in an inverted position with respect to the first prism? Draw a labelled diagram to Illustrate it. (c) Why does sun appear reddish at sunrise?</p> <p style="text-align: center;">(OR)</p> <p>(a) Define the term dispersion of white light. (b) Name the colour of light which bends (i) the most, (ii) the least ,while passing through a glass prism. Draw a ray diagram to justify your answer. (c) Name the Phenomenon which causes the twinkling of stars.</p>
32	<p>(a) Define S.I. unit of resistance. (b) What happens to the resistance as the conductor is made thinner? (c) A piece of wire of resistance 20 ohm is drawn out so that its length is increased to twice its original length. Calculate the resistance of the wire in the new situation.</p>
33	<p>(1) With the help of a neat labeled diagram explain the electro refining of copper. (2) Differentiate between a mineral and an ore.</p>

	OR
	<p>(1) What happens when a conc. solution of sodium chloride reacts with ammonia and carbon dioxide (write the equation).</p> <p>(2) What are decomposition reactions? Give one example each for the decomposition reaction carried out in the presence of electric current and sunlight</p>
34	<p>(1) What is a Thermochemical reaction? State one use of this equation.</p> <p>(2) Compare metals and non-metals with respect to: (a) Conductivity (b) Reaction with oxygen</p> <p>(3) What are constituents of solder?</p>
35	<ol style="list-style-type: none"> 1. Why is the small intestine in herbivores larger than in carnivores? 2. Name any three important enzymes of pancreas and the food component on which they act. What is the role of pepsin in stomach? 3. Give any two functions of lymph. <p style="text-align: center;">OR</p> <ol style="list-style-type: none"> 1. Draw a well diagram of stomata and label any two parts. State any two functions of the same. 2. After long running you may experience cramps in your leg muscles. What is the reason behind it? 3. How does diaphragm help in inhalation?
36	<ol style="list-style-type: none"> 1. Give an example of a plant hormone that promotes its growth. Where is it synthesized? 2. Name a gland associated with brain. Which problem is caused due to the deficiency of the hormone released by this gland? 3. Draw a neat diagram of a reflex arc and label any three parts.
End of the Question Paper	