



PERIODIC TEST 1 (APRIL, 2023)

GRADE- X SUBJECT- GENERAL SCIENCE

TIME: 90 MIN.

M.M. - 40

GENERAL INSTRUCTIONS:

- i. This question paper consists of 14 questions in 5 sections.
- ii. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- iii. Section A consists of 3 one word questions carrying 1 mark each.
- iv. Section B consists of 3 Very Short questions carrying 02 marks each.
- v. Section C consists of 3 Short Answer type questions carrying 03 marks each.
- vi. Section D consists of 2 Long Answer type questions carrying 05 marks each.
- vii. Section E consists of 3 source-based/case-based units of assessment of 04 marks each with sub-parts.

SECTION - A

Answers to these questions should be one - two words

Q1. A student burnt a metal A found in the form of ribbon. The ribbon burnt with a dazzling flame and a white powder B was formed which was basic in nature. Identify A and B. Write the balanced chemical equation.

Q2. When hydrogen sulphide gas is passed through a blue solution of copper sulphate, a black precipitate of copper sulphide is obtained and the sulphuric acid so formed remains in the solution. The reaction is an example of a _____

Q3. The laws of reflection hold true for _____

SECTION – B

Answers to these questions should in the range of 30 to 50 words

Q4. What is the role of acid in our stomach?

Or

Explain the significance of photosynthesis. Write the balanced chemical equation involved in the process.

Q5. Draw a labelled ray diagram to show the path of the reflected ray corresponding to an incident ray of light parallel to the principal axis of a convex mirror. Mark the angle of incidence and angle of reflection on it.

Q6. Lead nitrate solution is added to a test tube containing potassium iodide solution.

- Write the name and colour of the compound precipitated.
- Write the balanced chemical equation for the reaction involved.
- Name the type of this reaction justifying your answer.

SECTION - C

Answers to these questions should be in the range of 50 to 80 words

Q7. Explain the processes of aerobic respiration in mitochondria of a cell and anaerobic respiration in yeast and muscle with the help of word equations?

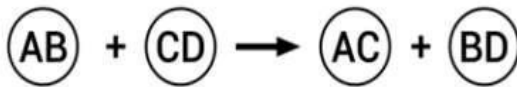
Or

Describe the structure and function of Nephron.

Q8. (i)



(ii)



Identify the types of reaction mentioned above in (i) and (ii). Give one example for each type in the form of a balanced chemical equation.

Q9. AB and CD, two spherical mirrors, from parts of a hollow spherical ball with its centre at O as shown in the diagram. If arc AB = 1/2 arc CD, what is the ratio of their focal lengths? State which of the two mirrors will always form a virtual image of an object placed in front of it and why?

SECTION - D

Answer to these questions should be in the range of 80 to 120 words.

Q10. Explain with the help of neat and well labelled diagrams the different steps involved in nutrition in Amoeba.

Q11. 1 g of copper powder was taken in a China dish and heated. What change takes place on heating? When hydrogen gas is passed over this heated substance, a visible change is seen in it. Give the chemical equations of reactions, the name and the colour of the products formed in each case.

SECTION - E

Case - based/ data -based questions with 2 to 3 short sub - parts.

Q12. The heart is a muscular organ which is as big as our fist because both oxygen and carbon dioxide have to be transported by the blood. The heart has different chambers to prevent the oxygen rich blood from mixing with the blood containing carbon dioxide.

- 1) Name the part which receives deoxygenated blood from the body.
- 2) Name the blood vessel that carries oxygenated blood from the heart.
- 3) What is the blood pressure rate for a normal person?
- 4) State the role of valves present in the heart.

Q.13. A solution of slaked lime produced by the reaction is used for white washing walls. Calcium hydroxide reacts slowly with the carbon dioxide in air to form a thin layer of calcium carbonate on the walls. Calcium carbonate is formed after two to three days of white washing and gives a shiny finish to the walls. It is interesting to note that the chemical formula for marble is also CaCO_3 .

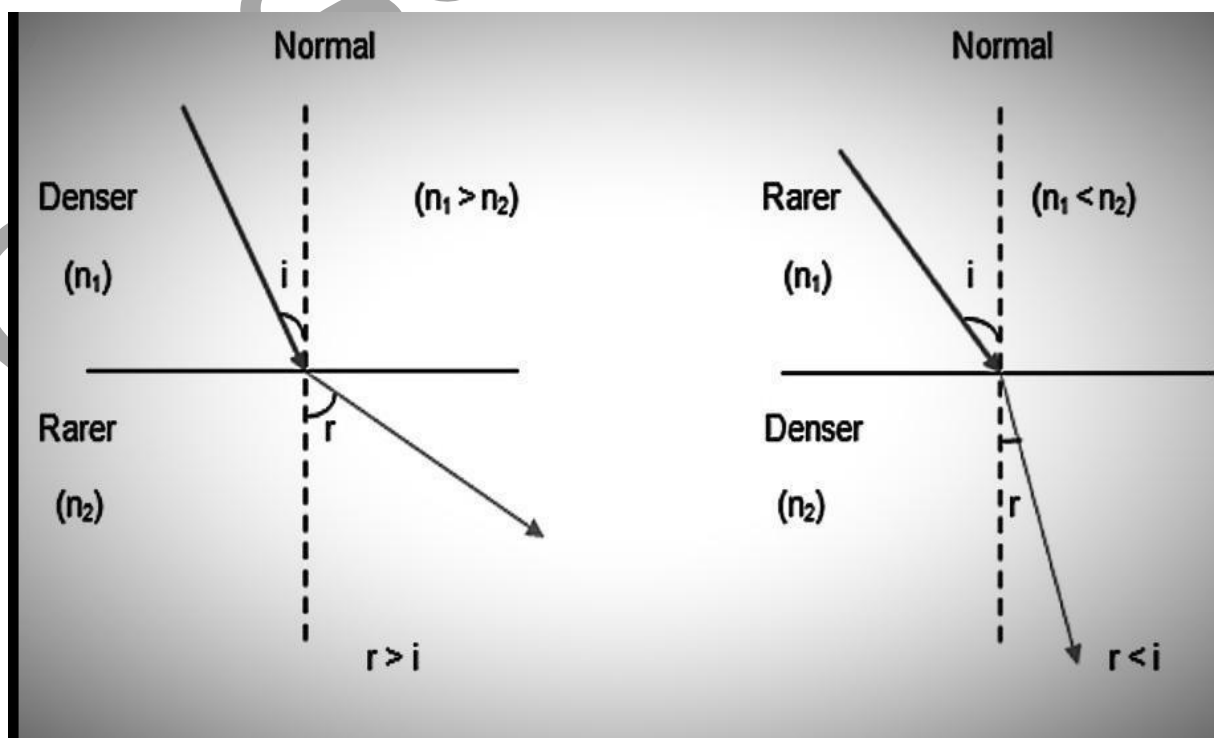
On the basis of above paragraph answer the following questions:

- 1) Give the reaction for the formation of calcium carbonate with physical states.
- 2) Write the formulas of slaked lime, quick lime.
- 3) Explain why calcium carbonate is used for white washing and not any other substance.
- 4) Write any one application of calcium carbonate other than white washing.

Or

- 4.) Explain the importance of writing the physical states in a chemical equation.

Q14. When the rays of light travel from one transparent medium to another, the path of light is deviated. This phenomenon is called refraction of light. The bending of light depends on the optical density of the medium through which light passes.



The speed of light varies from medium to medium. A medium in which the speed of light is more is optically rarer whereas in which speed of light is less is optically denser medium. Whenever light goes from one

medium to another, the frequency of light does not change however, speed and wavelength change. It concludes that change in speed of light is the basic cause of refraction.

1) When light travels from air to glass, light bends away from the normal. True/False

2) When light passes from one medium to another, what happens to the frequency of light?

3) The bottom of the pool filled with water appears to be _____ due to refraction of light.

4) When light changes medium, what happens to the wavelength of the light?