

GT - 74**QUARTERLY EXAMINATIONS - 2015 - 2016****GENERAL SCIENCE - Paper - I****(Physical Science)****(English Version)****PART - A****X Class]****(Max. Marks : 35)****[Time : 2 Hrs.****SECTION - I (Marks : 10)**

Note :- 1) Answer any FIVE of the following questions choosing at least two from each group.

2) Each question carries 2 Marks.

Group - A

1. ✓ Why do we get dew on the surface of cold soft drink bottle kept in air ?
2. ✓ Write the differences between concave and convex mirrors.
3. ✓ Ask two questions to your friend to know about Refraction of light.
4. ✓ Draw the diagrams of different lens and write its names.

Group - B

5. ✓ Explain Rancidity. Write one prevention.
6. Give two examples for oxidation - Reduction reactions.
7. Plaster of Paris should be stored in moisture - proof container. Why ?
Write your hypothesis ?
8. ✓ We can mix acid to water. But not water to acid. Why ?

SECTION - II (Marks : 4)

Note :- 1) Answer any FOUR of the following questions.

2) Each question carries 1 Mark.

9. ✓ Define Temperature.
10. ✓ Why do stars appear twinkling ?
11. ✓ Write which lens is used by watch repaires.

12. What is the use of keeping food in air tight containers ?
13. Write two examples which have water of crystallization.
14. What is meant by neutralization reaction ?

SECTION - III (Marks : 16)

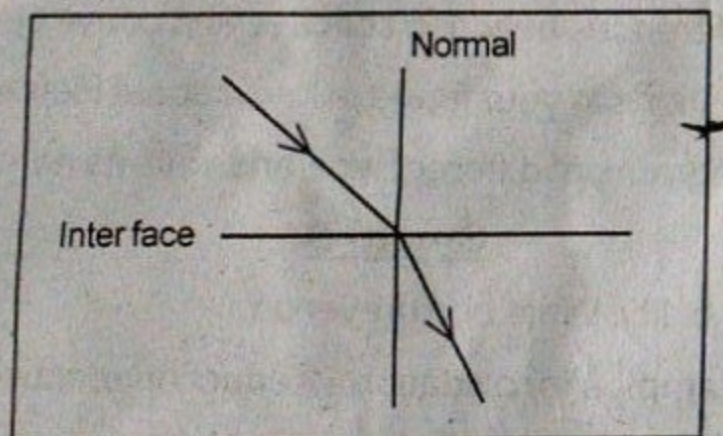
Note :- 1) Answer any FOUR of the following questions choosing atleast two from each group.

2) Each question carries 4 Marks.

Group - A

15. Explain the procedure of finding specific heat of solids, Experimentally.
16. How can you appreciate the role of Reflection of light in our daily life by using four examples ?

17.



By using above figure

- Identify the Denser and Rarer medium.
 - Identify the Angle of Incident and angle of Refraction.
 - Write a relation between velocity of light (v) in those two mediums.
 - Write a relation between Refractive Indices (n) In those two mediums.
18. The focal length of converging lens is 20 cm. An object is 60 cm from the lens. Where will the image be formed and what kind of image is it ?

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Group - B

19. Write the balanced chemical equation for the following and identify the type of reaction in each case.
- a) Zinc $_{(s)}$ + Calcium chloride $_{(a.q)}$ \rightarrow Zinc chloride $_{(a.q)}$ + Calcium $_{(s)}$
- b) Megnesium $_{(z)}$ + Iodine $_{(g)}$ \rightarrow Megnesium Idodide $_{(s)}$
20. How chemical displacement reactions differ from chemical decomposition reaction ? Explain with an example for each.
21. Compounds such as alcohols and glucose contain hydrogen but are not categorized as acids. Explain with suitable diagram.
22. Give two important daily uses of washing soda and backing soda.

SECTION - IV (Marks : 5)

Note :- 1) Answer any ONE of the following questions.

2) Question carries 5 Marks.

23. Draw Ray diagram for the following position of double convex lens.
- a) Object is placed beyond C_2 .
24. Draw the diagram showing electrolysis of water and label the parts.



Regd. No. Marks : **GT - 74 A****QUARTERLY EXAMINATIONS - 2015 - 2016****GENERAL SCIENCE - Paper - I****(Physical Science)****(English Version)****PART - B****X Class]****(Max. Marks : 15)****[Time : 1/2 Hr.****Note :- 1. Answer all the questions.****2. Each question carries 1/2 Mark.****I. Choose the correct answer and write its letter in the brackets.**

- Melting is a process in which solid phase changes to
 - Liquid phase
 - Liquid phase to constant temperature
 - Gaseous state
 - Any phase
- Temperature of a steel rod is 330 K. Its temperature in °C is
 - 55°C
 - 57°C
 - 59°C
 - 53°C
- Latent heat of vapourization for water is
 - 100°C
 - 0°C
 - 80 cal / g
 - 540 cal / g
- Specific heat 'S' =
 - $\frac{Q}{\Delta T}$
 - $Q \Delta T$
 - $\frac{Q}{m \Delta T}$
 - $\frac{m \Delta T}{Q}$
- We get a virtual image in a concave mirror when the object is placed
 - At F
 - Between the pole and F
 - At C
 - Beyond C
- The ratio of the focal length of spherical mirror to its radius of curvature is
 - 0.5
 - 1
 - 2
 - 3

[Turn Over

7. Formula for curved mirrors is ()
- A) $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$ B) $\frac{1}{f} = \frac{1}{u} + \frac{1}{v}$
- C) $\frac{1}{f} = \frac{1}{u} - \frac{1}{v}$ D) None
8. The drivers mirror used in automobiles is ()
- A) Convex B) Concave C) Plane D) None
9. Which of following is snell's law ? ()
- A) $n_1 \sin i = \frac{\sin r}{2}$ B) $\frac{n_1}{n_2} = \frac{\sin r}{\sin i}$
- C) $\frac{n_2}{n_1} = \frac{\sin r}{\sin i}$ D) None
10. Total internal reflection takes place when the light ray travels from ()
- A) Rarer to denser medium B) Rarer to rarer medium
- C) Denser to rarer medium D) Denser to denser medium
11. Mirage is an example of ()
- A) Reflection B) Refraction
- C) Total Internal reflection D) Scattering
12. What is the value of absolute refractive index of water ()
- A) 1.003 B) 1.33 C) 1.52 D) 1.77
13. The light ray does not deviate when it travels through _____ ()
- A) Focus B) Centre of curvature
- C) Optic center D) None
14. This reaction is an example of $2H_2 + O_2 \rightarrow 2H_2O$ ()
- A) Combination reaction B) Decomposition reaction
- C) Displacement reaction D) Double decomposition reaction
15. $2pbO + C \rightarrow 2pb_{(s)} + CO_2$ which is oxidized ()
- A) pb B) pbO C) C D) CO_2
16. Choose double displacement reaction ()
- A) $X + YZ \rightarrow XY + Z$ B) $X + Y \rightarrow XY$
- C) $XYZ \rightarrow YZX$ D) $XY + AB \rightarrow AX + BY$

17. Colour of methyl orange in alkali conditions ()
 A) Orange B) Yellow C) Red D) Blue
18. A solution turns Red Litmus to blue its P^H is likely to be ()
 A) 1 B) 4 C) 5 D) 10
19. What gas is produced when magnesium is made to react with hydrochloric acid ()
 A) Hydrogen B) Oxygen
 C) Corbondioxide D) No gas is produced
20. $H_2O + () \rightarrow H_3O^+$ ()
 A) H^+ B) OH^- C) H_2O D) H_3O

II. Fill in the blanks.

21. The sultryness in summer days is due to _____.
22. The geometric centre of the mirror is _____.
23. The focal length of convex lens in water compare to air is _____.
24. Speed of light in vaccum is _____ m / sec. .
25. Fermate principle says _____.

III. Match the following.

- | <u>Group - A</u> | | <u>Group - B</u> |
|----------------------|-----|------------------------------|
| 26. Plaster of paris | () | A) $CaO Cl_2$ |
| 27. Gypsum | () | B) $NaH CO_3$ |
| 28. Bleaching powder | () | C) $Na_2 CO_3$ |
| 29. Baking soda | () | D) $CaSO_4 \frac{1}{2} H_2O$ |
| 30. Washing soda | () | E) $CaSO_4 2 H_2O$ |
| | | F) $Na_2 CO_2$ |
| | | G) $Ca_2 OCl_2$ |