S-49-A

MIDTERM EXAMINATIONS (2018 - 19)

GENERAL SCIENCE - Paper - I

(PHYSICAL SCIENCES)

(English Medium)

PART - A & B

Class : X **(Max. Marks : 40)** **Time : 2.45 Hrs.**

Instructions :

1. **This paper contains Part A & Part B.**
2. **Answer the questions under part–A on a separate answer book. Write the answers to the questions under Part–B on the question paper itself and attach it to the answer book of Part–A.**
3. **Answer all the questions. Internal choice in given to the questions under Section - III.**
4. **In the duration of 2 hr. 45 min. 15 min time is alloted to read the question paper.**

Marks : 30 **PART - A** **Time : 2 Hrs.**

Note : 1. **Part-A contains three sections.**

2. **All the questions are compulsory.**

3. **There is no overall choice. However internal choice is there under Section–III.**

Section - I

1. **Answer all the questions.**
2. **Each question carries 1 Mark.** **$4 \times 1 = 4$**

1. Explain the terms in the equation $Q = ms\Delta t$
2. $CuO + H_2 \rightarrow Cu + H_2O$. In this reaction which substance is subjected to reduction and which is subjected to oxidation.
3. Write the Fermat principle.
4. What will happen when the incident angle exeeds the critical angle ?

P.T.O

Section - II

Note : 1. Answer all the questions.

2. Each question carries 2 Marks. **5 × 2 = 10**

5. What role does the specific heat play in keeping a watermelon cool for a long time after removing it from the fridge on a hot day ?
6. How a chemical displacement reaction differ from chemical decomposition reaction ? Explain with an example for each.
7. Imagine that spherical mirrors were not known to human beings, guess the consequences.
8. What is a neutralisation reaction ? Give one example.
9. The speed of light in diamond is 1,24,000 km/s. Find the refactive index of diamond if the speed of light in air is 3,00,000 km/s.

Section - III

Note : 1. Answer all the questions.

2. Internal choice is these for each question.

3. Each question carries 4 Marks. **4 × 4 = 16**

10. What are the factors that effect the rate of evaporation ? Explain with suitable examples.

(OR)

How will you find the focal length of the given concave mirror experimentally.

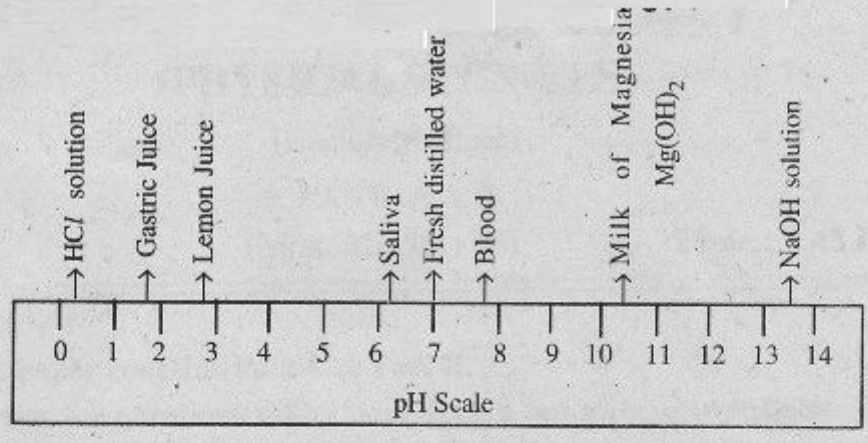
11. $Al + Fe_2O_3 \rightarrow Al_2O_3 + Fe$

(Atomic masses of Al = 27, Fe = 56, O = 16). Balance the above chemical equation and calculate the amount of Fe obtained when 270 kgs of Aluminium is used.

(OR)

What are the uses of sodium hydrogen carbonate ?

12. 3



Basing on the above information answer the following questions.

a) Which human body fluid has alkali nature ?

b) Which substance is having the neutral nature ?

c) Which substance is having highest alkali nature ?

d) Which substance has highest acidic nature ?

(OR)

S.No.	Substance	Refractive Index
1.	Air	1.0003
2.	Water	1.33
3.	Kerosene	1.44
4.	Canada balsam	1.53
5	Diamond	2.42

Basing on the above information answer the following questions.

a) In which of the substances the velocity of light is heigh ?

b) In which substance the velocity of light is less ?

c) What is the relative refractive index of water when compared to diamond ?

d) What is the velocity of light in vacuum ?

13. Draw a ray diagram for the position of the image when an object is placed on the principle axis of concave mirror beyond 'C'. And also write the properties of the image.

(OR)

Draw a neat diagram for the arrangement of apparatus in the laboratory for decomposition of water using electricity.

Regd. No. | S-49-B | Marks :

MIDTERM EXAMINATIONS (2018 - 19)

GENERAL SCIENCE - Paper - I

(PHYSICAL SCIENCES)

(English Medium)

Part - B

Class : X] (Marks : 10)

Name of the Student : ..... Roll No.: .....

Note :1. Answer all questions.

2. Each question carries $^1/_2$ mark. $20 \times {}^1/_2 = 10$

14. Which of the following is a warming process. [ ]

A) Evaporation B) Boiling

C) Both A & B D) Condensation

15. The boiling point of water is ..... [ ]

A) 0°C B) 100K C) 373K D) 373°C

16. Which one of the following is having high specific heat. [ ]

A) Copper B) Water C) Lead D) Kerosene

17. When ice melts its temperature ..... [ ]

A) Remains constant B) Increases

C) decreases D) cannot say

18. Burning of Magnesium ribbon is ..... type of reaction. [ ]

i) Endothermic ii) Exothermic

iii) Chemical Combination iv) Chemical decomposition

A) (ii) & (iii) only B) (ii) only

C) (iii) only D) (i) & (iv) onlys

19. The gas released when Lead Nitrate is heated is ..... [ ]

A) H_2 B) NO_2 C) CO_2 D) Cl_2

P.T.O

20. $Fe + CuSO_4 \rightarrow FeSO_4 + Cu$. From this reaction we can say [ ]

A) Reactivity of Fe and Cu is same B) Cu is more reactive than Fe

C) Fe is more reactive than Cu D) Cannot say anything

21. A : Addition of Oxygen to a substance is called oxidation.

B : When sulpher is burned in air it gives sulphur dioxide. [ ]

A) A is correct, B is not a correct example

B) A and B both are wrong

C) A is not correct but 'B' is correct example

D) A is correct and B is correct example

22. Which miror gives both real and virtual images. [ ]

A) concave B) plane C) convex D) all the above

23. While doing an experiment the incident ray makes an angle 30° with the plane mirror. What is the angle of reflection ? [ ]

A) 30° B) 45° C) 60° D) 90°

24. When an object is placed at a distance of 40 cm before a concave mirror on its axial line the image falls on 'C'. What is the focal length of the concave mirror. [ ]

A) 40 cm B) 20 cm C) 10 cm D) 60 cm

25. For testing the teeth the dental doctor uses ..... [ ]

A) Convex mirror B) Plane mirror

C) Both A & B D) Concave mirror

26. What is the colour of phenolphthalein indicator in Sodium hydroxide solution [ ]

A) Pink B) Red C) Yellow D) White

27. Two solutions 'X' and 'Y' cannot change the colour of Red litmus. Guess the two solutions may be [ ]

A) X-Alkali Y-Neutral B) X-Acidic, Y-Neutral

C) X-Acidic, Y-Alkali D) X-Alkali, Y-Alkali

28. The formula of Bleaching powder is ..... [ ]

A) $CaCl_2$ B) $CaOCl$ C) $CaOCl_2$ D) Ca_2OCl

29. The chemical used in the bandages for fixing fractured bones is[ ]

A) Washing soda B) Baking Soda

C) Bleaching powder D) Plaster of Paris

30. Which one of the following is denser medium. [ ]

A) Vacuum B) Air C) Water D) Glass

31. $n_1 \sin i = n_2 \sin r$. This is ..... law. [ ]

A) Fermat B) Archimedis C) Snell D) Newton

32. The deviation the light ray suffers when it passes through a glass slab is ..... [ ]

A) 90° B) 0° C) 45 ° D) 60°

33. The circle angle is ..... [ ]

A) Angle of incidence B) The angle of refraction

C) Angle of reflection D) Angle of deviation