S.S.C PUBLIC EXAMINATION

MODEL PAPER-2

GENERAL SCIENCE ☆ PAPER - 1

Time :2½ Hours	PART - A & B	Max.Marks:50

Instructions: 1. Answer the question under **PART-A** on a seperate answer book.

2. Write the answer to the questions under **PART-B** on the question paper itself and attach it to the answer book of **PART-A**

Time : 2 Hours	PART - A	Max.Marks:35

Note: Use a seperate answer book to answer the questions in this part

SECTION-I   (5 X 2 = 10 M)

Note :- 1) Answer **ANY FIVE** questions, choosing atleast TWO from each group.

2) Each question carries '**TWO**' mark.

Group-A

1. Write the differences between evaporation and boiling

2. Write the rules for sign convention.

3. Why should we connect the electric appliances in parallel to household circuit?

4. How do you appreciate the variation between magnetic field and electricity the changed the life style of mankind.

Group-B

5. Why does respiration reaction considered as exothermic reaction? Explain

6. Which rule is violated in the electronic configuration $1s^02s^22p^4$.

7. Draw the shapes of methane (CH_4) and Ammonia NH_3.

8. How do you appreciate the role of esters in every day life.

SECTION-II   (4 X 1 = 4 M)

Note :- 1) Answer **ANY FOUR** questions from the following.

2) Each question carries '**ONE**' mark.

9. Why does ice floats on water

10. Determine the refractive index of benzene if the critical angle of it is 42°.

11. What do you mean by short circuit.

12. Give any two examples of factory indicators.

13. Write the general electronic configuration of Transition elements.

14. What happens when a small piece of sodium is dropped into ethanol.

SECTION-III   (4 X 4 = 16 M)

Note :-   1) Answer **ANY FOUR** questions, choosing atleast **TWO** from each group.

2) Each question carries '**FOUR**' marks.

Group-A

15. What is the principle of method of mixtures. Verify it with an activity.

16. Explain briefly the reasons for the blue of the sky.

17. Derive the equation for resultant resistance of resistors in series combination.

18. Explain the working of electric motor with a neat diagram.

Group-B

19. Compounds such as Alcohols and glucose contain hydrogen but are not categorized as acids. Discribe an activity to prove it.

20. What are the postulates of Bohr atomic model? Write the defects on it.

21. Explain how the elements are classified into s, p, d, f in the periodic table and give the advantage of this kind of classification.

22. Define Homologous series of carbon compounds mention any two characterstics of Homologous series.

SECTION-IV   (1 X 5 = 5 M)

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

2) Each question carries '**FIVE**' marks.

23. Draw the diagram of a A.C Generators. Name the parts.

24. Draw the diagram showing heating of $CaCO_3$ and liberation of CO_2. and label the parts.

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Time: 30 Minutes	**PART - B**	Marks : 15

Instructions:

1) Answer All the questions.
2) Each question carries ½ mark.
3) Candidates must use the CAPITAL LETTERS while answering the multiple choice questions.
4) Marks will not be awarded in case of any overwriting, rewriting or erased answers.

Note: Answer the following questions in the space provided and attach it to the main answer book of **PART - A.**

I **Write the 'CAPITAL LETTERS' showing the correct answer for the following questions in the brackets provided against them.** **(20x½=10M)**

1. The temperature of a steel rod is 330K. Its temperature in C° is. [   ]

   a) 55C°   b) 57C°   c) 59C°   d) 53C°

2. The mirror which has a wide field of view must be [   ]

   a) cancave   b) convex

   c) plane   d) None of these

3. The sharing mirrors, Dentists mirror works on when the object is at [   ]

   a) at 'C'   b) In between C and F

   c) at F   d) In between F and D

4. The Refractive Index of Diamond is [   ]

   a) 2.42   b) 3.51   c) 1.42   d) 2.27

5. The focal length of the lens depends on upon [   ]

   a) Material of the lens   b) Radius of curvature

   c) Medium in which lens is placed   d) All the above

6. The focal length of $-f$ shows……. lens [   ]

   a) Convex   b) Concave   c) Biconvex   d) Plano convex

7. The intensity of light is maximum at ………. in scattering of light [   ]

   a) 60°   b) 90°   c) 45°   d) 0°

8. Resultant resistance of $4\Omega, 6\Omega$ are in parallel combination [   ]

   a) 10Ω b) 2.8Ω c) 3.4Ω d) 2.4Ω

9. Which of the following factor is effect of electric shock for human body [   ]

   a) Potential difference   b) Electric current

   c) Resistance of human body   d) all the above

10. Which converts mechanical energy into electrical energy [   ]

    a) motor   b) battery

    c) generator   d) switch

11. Precipitate in a reaction is indicated by which arrow [   ]

    a) $\rightarrow$ b) $\downarrow$ c) $\uparrow$ d) $\leftarrow$

12. P^H was introduced by   [   ]

    a) Sorensen   b) Bohr   c) Dalton   d) Charles

13. P^H value of Lemon juice is…   [   ]

    a) 2.5   b) 7.32   c) 5.8   d) 7.45

14. The maximum number of electrons in 'K' shell is   [   ]

    a) 8   b) 18   c) 32   d) 2

15. The electronic configuration Cu is   [   ]

    a) $(Ar)4s^2 3d^9$ b) $(Ar)4s^1 3d^{10}$ c) $(Ar)4s^2 3d^{10}$ d) $(Ar)4s^1 3d^5$

16. 1 Pico meter (pm) is ……………… mt   [   ]

    a) 10^{-9} b) 10^{-12} c) 10^{-19} d) 10^{-8}

17. Bromine belongs to ………….. family.   [   ]

    a) Alkaline metals   b) Boran

    c) Chalcogens   d) Halogens

18. The coordination number of Na$^+$ in NaCl Crystal   [   ]

    a) 8   b) 2   c) 6   d) 4

19. The reducing agent in thermite process   [   ]

    a) Al b) Mg c) Fe d) Si

20. A compound which is basic constituent of many cough syrup is   [   ]

    a) Methanol   b) Ethanol   c) Propanol   d) None of these

II   **Fill in the blanks with suitable answers.**

    Each question carries ½ mark.   **(5x½=2½M)**

21. …………… is a cooling process.

22. Peri scope works is the principle of ………………

23. ……………the property of light is not depends upon medium.

24. Unit of speicific resistance ………………

25. The number of lines passing through the plane perpendicular to the field is called ………………

III   **Match the following:**   **(5x½=2½M)**

              A   **B**

26. NH_3 [   ]   a. 180°

27. CH_4 [   ]   b. 120°

28. H_2O `   [   ]   c. 104°, 31^1

29. $BeCl_2$ [   ]   d. 107°, 48^1

30. BF_3 [   ]   e. 109°, 25^1

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