S.S.C PUBLIC EXAMINATION

MODEL PAPER-1

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. Explain why dog pant during hot summer days using the concept of evaporation.
2. How do you appreciate the working of ciliary muscles in the eye?
3. What do you meant by electric shock. Explain how it takes place.
4. The value of magnetic field induction which is uniform is 2T. what is the flux passing through the surface of area 1.5m^2 perpendicular to field.

Group-B

5. Why do you apply paint on iron articles.
6. Write the four quantum numbers for the electron that enters last in potassium atom.
7. Plaster of parries should be stored in a moisture- proof container. Explain Why?
8. Explain the cleaning action of soap.

SECTION-II (4 X 1 = 4 M)

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

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

9. The refractive index of glass with respect to water 9/8. Then what is the refractive index of water relative to glass.
10. Define Lenz's Law.
11. What is the reason for using tungsten as a filament in electric bulb.
12. Write the general formula for Alkanes, Alkenes.
13. What is metal used in Amalgams.
14. Draw the shape of H_2O.

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. Explain the procedure of finding specific heat of a solid experimentally.

16. How do you verify the 1st law of reflection of light with an experiment.

17. Draw ray diagrams for the following positions and explain the nature and position of image.

a. Object is placed at C_2

b. Object is placed between F_2 and optic centre P.

18. A house has four tube lights, three fans and a television. Each tube light draws 40 watts. The fan draws 80 w all and the television draws 100w on an average the tube tights are kept on for 5 hours, all fans for 12 hrs and the television for 6hours everyday. Find the most of electric energy used in 30 days at the rate of 3.00 per K.W.H.

Group-B

19. Balance the following chemical equations including the physical states.

a. $C_3H_{12}O_3 \longrightarrow C_2H_5OH + CO_2$

b. $Fe + O_2 \longrightarrow Fe_2O_3$

c. $NH_3 + Cl_2 \longrightarrow N_2 + NH_4Cl$

d. $Na + H_2O \longrightarrow NaOH + H_2$

20. Explain the significance of three Quantum numbers in predicting the positions of an electron in an atom.

21. What is a periodic property? How do the following properties change in a group and period? Explain

a. Atomic radius b. Ionization energy

c. Electron affinity d. Electro negativity

22. How do you condemn the use of alcohol as a social practice.

SECTION-IV (1 X 5 = 5 M)

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

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

23. Draw a neat diagram of electric motor. Name the parts.

24. Draw a neat diagram of Reverb-oratory furnace and label it neatly.

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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. Which of the following is a warning process. [ ]

a. Evaporation b. condensation c. boiling d. all the above.

2. We get a diminished image with a concave mirror when the object is placed. [ ]

a. at F b. between the pole and F

c. at C d. Beyond C.

3. Which of the following is Snell's law. [ ]

a. $n_1 \sin i = \sin r / n_2$ b. $n_1 / n_2 = \sin r / \sin r$

c. $n_2 / n_1 = \sin r / \sin i$ d. $n_2 \sin i = constant$

4. The value of the focal length of the lens is equal to the value of the image distance when the ray are [ ]

a. passing through the optic centre b. parallel to the principle axis

c. passing through the focus d. in all the cases.

5. During refraction…….. Will not change. [ ]

a. wave length b. frequency c. speed light d. all the above

6. The splitting of white light into different colors (VIBGYOR) is called...[ ]

a. Dispersion b. scttening c. reflection d. all the above.

7. Magnification m= [ ]

a. v/u b. u/v c. h_0/h_i d. h_i/h_0

8. Joule / coulomb is the same as. [ ]

a. watt b.volt c.ampere d. ohm.

9. Three resistors of values $2\Omega, 4\Omega, 6\Omega$ are connected in parallel. The equivalent resistance of combination of resistors is…… [ ]

a. 12Ω b. 2Ω c. 4Ω d. 6Ω

10. Which converts electrical energy into mechanical energy? [ ]

a. motor b. Battery c. Generator d. Switch

11. $Fe_2O_3 + 2Al \longrightarrow H_2O_3 + 2Fe$ **The above reaction is an example of.** [ ]

a. Combination reaction b. Decomposition reaction

c. Displacement reaction d. Double decomposition reaction.

12. The color of methyl orange indicator in acidic medium is. [ ]

a. Yellow b. green c. orange d. red.

13. If a base dissolves in water by what name is it better known. [ ]

a. neutralization b. basic c. acid d. alkali

14. If $\ell = 1$ for an atom then the number of orbitals in its sub-shell is. [ ]

a. 1 b. 2 c.3 d. 0

15. Which of the following is the most active metal. [ ]

a. lithium b. sodium c. potassium d. rubidium

16. Number of elements present in period-2 of the long form of periodic table. [ ]

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

17. An element A forms a chloride ACl_4. The number electrons in the valence shell of A. [ ]

a. 1 b.2 c.3 d.4

18. Galena is an ore of [ ]

a. Zn b. pb c. Hg d. Al

19. The suffix used for naming an aldehyde is [ ]

a. -ol b.-al c. -one d.-ene

20. Which one of the following hydrocarbon can show isomerism [ ]

a. C_2H_4 b.C_2H_6 c. C_3H_8 d.C_4H_{10}

II Fill in the blanks with suitable answers.

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

21. The sultryness in summer days is due to.....

22. The distance between pole and focus.....

23. Hypermetropia can be corrected by using..... .

24. A thick wire has a..... resistance than thin wire.

25. Farday's law of induction is the consequence of..... .

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

A		B
26. Plaster of Paris	[ ]	a. $CaOCl_2$
27. Gypsum	[ ]	b. NaHCO3
28. Bleaching powder	[ ]	c. Na_2CO_3
29. Baking soda	[ ]	d. $CaSO_4.½H_2O$
30. Washing soda	[ ]	e. $CaSO_4.2H_2O$

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