

AP BOARD SSC CLASS 10

PHYSICAL SCIENCE MODEL PAPER SET 2

Time: 2 hrs. 45 min.

PART - A & B

Max. Marks: 40

Instructions:

1. This paper contains Part-A and Part-B. **PAPER - I**
2. Answer the questions under Part-A on separate answer book. Write the answers to the questions under Part-B on the question paper it self and attach it to the answer book of Part-A.
3. Answer all the questions. Internal choice is given to the questions under section-III.
4. In the duration of 2 hrs. 45 Min. First 15 minutes of time is allotted to read the question paper.

Time: 2 hrs

PART - A

Marks: 30

Instructions:

1. Part-A comprises THREE sections I, II and III.
2. ALL the questions are compulsory.
3. There is no over-all choice. However, there is an internal choice to the questions under section-III.

SECTION - I

Instructions:

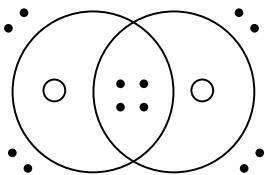
- i) Answer ALL the questions.
 - ii) Each question carries ONE Mark.
 - iii) Write the answers in 1 - 2 sentences. $4 \times 1 = 4$
1. The extraction of Cu from Cu_2S , which substance is used for auto reduction of sulphide ore.
 2. Find the length of the conductor which is moving with a speed of 10 m/s in the direction perpendicular to the direction of magnetic field of induction 0.5 T, if it induces an emf of 5V between the ends of the conductor.
 3. Which colour is exhibited by cupric chloride on flame test.
 4. Why do stars appear twinkling?

SECTION - II

Instructions:

- i) Answer ALL the questions.
 - ii) Each question carries TWO marks.
 - iii) Write the answers in 4 - 5 sentences. $5 \times 2 = 10$
5. Distinguish between acids and bases.
 6. What happens when the thick wire is taken as fuse wire?
 7. Can a convex mirror burn a paper? why.

8. With the help of given diagram answer the questions.



- i) How many valence electrons are present in oxygen atom?
ii) What is the bond between oxygen atoms?
9. Write the uses of Ethyl alcohol?

SECTION - III

Instructions:

- i) Answer ALL the questions.
ii) Write the answers in 8 - 10 sentences.
iii) There is an internal choice for each question.
iv) Each question carries FOUR Marks. 4 × 4 = 16
10. a) Explain how does the quantum numbers be useful to understand atomic structure?

(OR)

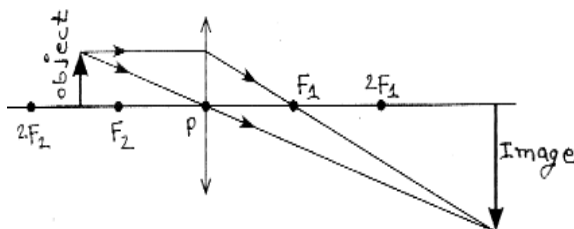
b) Write the main points of Valence Shell Electron Pair Repulsion Theory (VSEPR)?

11. a) List out the apparatus required to find the refractive index of a prism experimentally. Explain the procedure with the help of rough diagram.

(OR)

b) What are the reasons for corrosion of metals. How do you verify?

12. a) Observe the diagram and answer the following.



- i) State the position of object.
ii) Compare the distances of object and image from lens.
iii) Write the characteristics of image.
iv) Where we placed an object to get enlarged virtual image Formed by this lens?

(OR)

b) The electron affinity values of elements of VIIA and VIA groups are given in the table with the help of table answer the questions given below the table.

Group	Electron affinity values in KJ/mole
VIIA (Halogens)	F(-328), Cl(-349), Br(-325), IC(- 295), At(-270)
VIA (Chalcogens)	O(-141), S(-200), Ge(-195), IC(- 295), At(-270)

- i) What are the units of electron affinity?
 - ii) Arrange the elements of chalcogen group as per the decreasing order of their electron affinity values.
 - iii) How do the electron affinity values vary in a group and in a period?
 - iv) What happens to the energy value when electron affinity values will be either positive or negative?
13. a) Draw four ray diagrams with the formation of real images when an object is kept on principal axis at different positions of the concave mirror.

(OR)

b) Draw the Dot diagrams of formation of the molecules i) Ammonia, ii) Water

SECTION - IV

- i) Answer all the questions.
- ii) Each question carries $\frac{1}{2}$ Mark.
- iii) Marks will not be awarded in any case of over - written, rewritten or erased answers.
- iv) Write the CAPITAL LETTER (A, B, C, D) showing the correct answer for the following questions in the brackets provided against them.
14. The water droplets form on grass during winter morning is known as ()
 A) Humidity B) Fog
 C) Dew D) Condensation
15. Which of the following is a redox reaction ()
 A) $\text{NaCl} + \text{KNO}_3 \longrightarrow \text{NaNO}_3 + \text{KCl}$
 B) $2 \text{PbO} + \text{C} \longrightarrow 2 \text{Pb} + \text{CO}_2$
 C) $\text{Mg}(\text{OH})_2 + 2 \text{NH}_4\text{Cl} \longrightarrow \text{MgCl}_2 + 2 \text{NH}_4\text{OH}$
 D) $\text{HCl} + \text{NaOH} \longrightarrow \text{NaCl} + \text{H}_2\text{O}$
16. The radius of curvature of a spherical mirror is 18 cm. What is the focal length? ()
 A) 6 cm B) 9 cm C) 12 cm D) 36 cm
17. The gas obtained at the cathode in the chlor - alkali process is ()
 A) CO_2 B) Cl_2 C) O_2 D) H_2
18. Focal length of eye ()
 A) 2.0 - 2.20 cm B) 2.0 - 2.27 cm
 C) 2.27 - 2.5 cm D) 2.27 - 2.8 cm
19. 4th electron of Beryllium will have the four quantum numbers ()

n	l	m_l	m_s	n	l	m_l	m_s
A) 1	0	0	$+\frac{1}{2}$	B) 1	1	1	$+\frac{1}{2}$
C) 2	0	0	$-\frac{1}{2}$	D) 2	1	0	$+\frac{1}{2}$
20. Match the following ()
- | Group Numbers | Name of the element family |
|-----------------------|----------------------------|
| 1. 1(IA) | a) Chalcogen family |
| 2. 13(IIIA) | b) Noble gas family |
| 3. 16(VIA) | c) Boron family |
| 4. 18(VIII A) | d) Alkali metal family |
| A) 1-d, 2-a, 3-c, 4-b | B) 1-b, 2-d, 3-a, 4-c |
| C) 1-c, 2-b, 3-a, 4-d | D) 1-d, 2-c, 3-a, 4-b |

21. Match the following ()
- | | |
|-------------------------------|----------------------------|
| 1. H ₂ O molecule | a) Planer triangular shape |
| 2. BeCl ₂ molecule | b) Pyramidal shape |
| 3. BF ₃ molecule | c) V-Shape |
| 4. NH ₃ molecule | d) Linear |
| A) 1-c, 2-d, 3-b, 4-a | B) 1-d, 2-c, 3-b, 4-a |
| C) 1-c, 2-d, 3-a, 4-b | D) 1-c, 2-b, 3-d, 4-a |
22. The resultant of two resistances in series is 28 Ω. If one of them is 17 Ω. The resistance of second is ()
- A) 20 Ω B) 45 Ω C) 23 Ω D) 11 Ω
23. The IUPAC name of ()
- $$\begin{array}{ccccccc} \text{CH}_3 & - & \text{CH} & - & \text{CH} & - & \text{CH}_3 \\ & & | & & | & & \\ & & \text{CH}_3 & & \text{OH} & & \end{array}$$
- A) 2 - Methyl 3 - Butanal B) 3 - Methyl 2 - Butanal
C) 2 - Methyl 2 - Butanal D) 3 - Methyl 3 - Butanal
24. Which of the following does not belong to the same homologous series ()
- A) C₃H₈ B) C₄H₈ C) C₂H₆ D) CH₄
25. Match the following ()
- | ORE | Metal extracted |
|-----------------------|-----------------------|
| 1. Pyrolusite | a) Hg |
| 2. Magnesite | b) Mn |
| 3. Cinnabar | c) Ca |
| 4. Lime stone | d) Mg |
| A) 1-b, 2-d, 3-c, 4-a | B) 1-b, 2-a, 3-c, 4-d |
| C) 1-b, 2-d, 3-a, 4-c | D) 1-b, 2-c, 3-a, 4-d |
26. Accordingly to ()
- A) alphabetical order
B) decreasing atomic weight
C) increasing atomic weight
D) increasing atomic number
27. Mirage is an ()
- A) image B) real image
C) optical disturbance D) optical illusion
28. Mention the molecule which show polar covalent bond ()
- A) NaCl B) C₂H₆ C) HCl D) Mg Cl₂
29. If we touch a 240V current wire, then the electric current passes through our body is ()
- A) 0.001A B) 0.015A C) 0.024A D) 0.0024A

