ANDHRA PRADESH – SSC EXAMINATIONS - MARCH – 2017

IGNITE PHYSICS TARGET MODEL PAPER - 01

GENERAL SCIENCE , Paper – I

(Physical Sciences)

(English Version)

Time: 2 Hours 45 Min. **Parts A and B** **Maximum Marks : 40**

Instructions :

1. The Question paper contains Part-A and also Part-B.
2. 15 Min. is allotted for reading the question paper.
3. Answer the questions under Part-A on a separate answer booklet.
4. Write the answers to the questions under Part-B on the question paper itself and attach it to the answer booklet of Part-A.
5. Answer all the questions.

PART-A **Max. Marks : 30**

Section - I 4 x 1 = 4 Marks

Note :

1. Answer all the questions.
2. Each question carries One mark.

1. Your friend is not able to understand about Rancidity. Prepare two questions to ask him to make awareness about rancidity.

2. Equal amounts of spirit are kept in a cup and in a dish. Which will evaporate faster? Why?

3. Classify the following as Ionic molecules and Covalent molecules.

NaCl H_2O $CaCl_2$ CH_4

4. What is the reason behind the shining of diamonds and how do you appreciate it?

Section - II 5 x 2 = 10 Marks

Note :

1. Answer all the questions.
2. Each question carries Two marks.

5. Write the differences between evaporation and boiling.

6. How mirages were formed ? Explain.

7. Explain the formation of Linear shape in $BeCl_2$ molecule with Hybridisation concept ?

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8. Imagine that spherical mirrors were not known to human beings. Guess the consequences.

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

Section - III

4 x 4 = 16 Marks

Note :

1. Answer all the questions.
2. Each question carries Four marks.
3. Internal choice is given in questions.

10. Find the radii of curvature of a convexo – concave convergent lens made of glass with refractive index n=1.5 having focal length of 24cm. One of the radii of curvature is double the other.

(OR)

What do you understand about Myopia ? How do you correct it ? Explain.

11. Complete the following table.

Name of the element	Electorn Configuration	Valency	Number of valence electrons	Whether it participates in Ionic or Covalent or Both bonds
P	$1s^2\ 2s^2\ 2p^3$			Both
Q	$1s^2\ 2s^2\ 2p^2$	4		
R	$1s^2\ 2s^1$		1	Ionic
T	$1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^3$			

(OR)

Given below is the electronic configuration of elements A, B, C, D, E.

A.$1s^2$ B.$1s^2\ 2s^2\ 2p^6\ 3s^2$

C.$1s^2\ 2s^2\ 2p^6\ 3s^2\ 3p^3$ D.$1s^2\ 2s^2\ 2p^6$

E. $1s^2\ 2s^2$

Now answer the following.

(i) Which are the elements coming with in the same period ?

(ii) Which are the elements coming with in the same group ?

(iii) Which are the noble gas elements ?

(iv) To which group and period does the elements 'C ' belongs to ?

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12. How do you verify that resistance of a conductor is inversely proportional to the area of cross section of the conductor for constant length and temperature?

(OR)

Explain the procedure of an activity to prove that Copper sulphate is an example for water of crystallization.

13. Draw a neat schematic diagram of A.C. generator. What is the use of generator ?

(OR)

Which method is used to concentrate Sulphide ore. Draw a neat diagram that represent that method. Label the parts.

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GENERAL SCIENCE , Paper – I

(Physical Sciences)

(English Version)

Time: 2 Hours 45 Min. **Parts A and B** **Maximum Marks : 40**

PART-B **Maximum Marks : 10**

This Question paper contains 4 printed pages.

Instructions :

1. Answer all the questions.
2. Each question carries ½ Mark.
3. Marks will not be awarded in case of any overwriting and rewriting or erased answers.
4. Write the answers to the questions under Part-B on the question paper itself and attach it to the answer booklet of Part-A.
5. Write the 'CAPITAL LETER' showing the correct answer for the following questions in the brackets provided against them.

Section - IV **20 x ½ = 10** Marks

14. Phase change of a substance from liquid to gas at constant temperature is called …… [ ]

(A) Condensation (B) Evaporation

(C) Boiling (D) Sublimation

15. If an object is placed at 20 cm distance from the pole of a concave mirror, where should be the image formed ? (f = 10 cm) [ ]

(A) Between 'F' and 'P' (B) Beyond 'C'

(C) Between 'F' and 'C' (D) At 'C'

16. (i) Positive value (ii) Negative value

(iii) Less than +1 (iii) Greater than -1

The magnification of a convex mirror is ……..

Choose the correct option : [ ]

(A) (i) and (iii) (B) (i) and (iv)

(C) (ii) and (iii) (D) (ii) and (iv)

17. When a light ray travelled from air in to a medium, the critical angle was measured as 30^o. Find the refractive index of the medium. [ ]

(A) 2 (B) $\sqrt{2}$

(C) $\frac{1}{2}$ (D) $\frac{2}{\sqrt{3}}$

18. Lens formula [ ]

(A) $\frac{1}{f} = (n-1)\left(\frac{1}{R_1} - \frac{1}{R_2}\right)$ (B) $\frac{1}{f} = \frac{1}{v} + \frac{1}{u}$

(C) $\frac{1}{f} = (n-1)\left(\frac{1}{R_1} + \frac{1}{R_2}\right)$ (D) $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$

19. The work done by chemical force to move electron from positive pole to negative pole in a battery is …… [ ]

(A) electro motive force (B) Potential

(C) Potential difference (D) Electric current

20. Match the following:

Set-I	Set-II (Colours after corrosion)
(i) Iron	(a) Brown
(ii) Silver	(b) Black
(iii) Copper	(c) Green

Choose the correct answer : [ ]

(A) (i)-a, (ii)-b, (iii)-c (B) (i)-a, (ii)-c, (iii)-b

(C) (i)-c, (ii)-b, (iii)-a (D) (i)-b, (ii)-c, (iii)-a

21. Identify the chemical displacement reaction [ ]

(A) $H_2 + Cl_2 \rightarrow 2HCl$

(B) $2NH_4NO_3 \rightarrow 2N_2 + O_2 + 4H_2O$

(C) $2Al + 3CuCl_2 \rightarrow 2AlCl_3 + 3Cu$

(D) $Pb(NO_3)_2 + 2KI \rightarrow PbI_2 ( ) + 2KNO_3$

22. Substances (i) Acid (ii) Base (iii) Salt

Which of the above substance is an electric conductor ?

Choose the correct answer : [ ]

(A) (i) and (ii) (B) (i) Only

(C) (i) , (ii) and (iii) (D) (ii) Only

23. The number of Sigma (σ) bonds and Pi (π) bonds present in Nitrogen molecule [ ]

(A) $1\,\sigma$ and $1\,\pi$ (B) $1\,\sigma$ and $2\,\pi$

(C) $2\,\sigma$ and $1\,\pi$ (D) $1\,\sigma$ and $3\,\pi$

24. Heating ore in the absence of air is called ……. [ ]

(A) Combustion (B) Burning

(C) Calcination (D) Roasting

25. The functional group that represents Aldehyde [ ]

(A) -COOH (B) -OH

(C) $-NH_2$ (D) -CHO

26. A fish is in a pond. A hunter wants to shoot the fish accurately. Then…….. [ ]

(A) He should shoot the image of the fish

(B) He should shoot below the image of the fish

(C) He should shoot above the image of the fish

(D) Either he shoot the image or above the image of the fish

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27. P : An element 'X' has atomic number 18. It belongs to p-block.
Q : An element 'Y' has atomic number 19. It belongs to s-block.
Choose the correct answer : [ ]

(A) P - True, Q - True (B) P - True, Q - False
(C) P - False, Q - True (D) P - False, Q - False

28. Minimum material needed to verify Oersted's experiment [ ]

(A) Battery, Compass, Bar magnet, Switch, Copper wire
(B) Compass, Bulb, Battery, Ammeter, Copper wire
(C) Battery, Ammeter, Volt meter, Resistor, Switch, Copper wire
(D) Battery, Copper wire, Compass

29. Match the following:

Set-I	Set-II (Colours produced when heated up)
(i) Cupric chloride	(a) Yellow
(ii) Strontium chloride	(b) Green
(iii) Sodium vapours	(c) Red

Choose the correct answer : [ ]

(A) (i)-a, (ii)-b, (iii)-c (B) (i)-a, (ii)-c, (iii)-b
(C) (i)-c, (ii)-b, (iii)-a (D) (i)-b, (ii)-c, (iii)-a

30. Observe the following table.

Material	Resistivity (in Ω-m)	Material	Resistivity (in Ω-me)	Material	Resistivity (in Ω-m)
Aluminium	2.82×10^{-8}	Tungsten	5.60×10^{-8}	Nickel	6.99×10^{-8}

Identify the correct material that is a bad conductor of electricity. [ ]

(A) Aluminium (B) Tungsten
(C) Nickel (D) None of these

31. 50 gm of an yellow colour substance was taken in a watch glass and kept under sunlight. After some time it turns in to grey/black colour powder. The yellow colour substance is Silver bromide.
What is the product ? [ ]

(A) Silver oxide (B) Silver carbonate
(C) Silver (D) Bromine

32. …… is vision defect when the ability of accommodation of the eye usually decreases with ageing. [ ]

(A) Hypermetropia (B) Presbyopia
(C) Myopia (D) Colour blindness

33. I am the most useful material for students to draw diagrams.
I am an allotrope of carbon. I have luster property.
Some body used me as lubricants. Who am I ? [ ]

(A) Coal (B) Coke
(C) Granite (D) Graphite

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