

**MODAL PAPER - III**

**PHYSICAL SCIENCES -I**

**(ENGLISH MEDIUM)**

**PART A & B**

**Class : X**

**Max. Marks: 40**

**Time : 2.45 hr**

**Marks : 30**

**PART - A**

**Time : 2 hr**

- Note:**
- 1) Write the answer of 'Part-A' on separate answer, booklet.
  - 2) Answer the 'Part-B' on the same, and is attach to. the 'Part-A' Answer booklet.
  - 3) Additional 15 minutes are given to. read the question paper, before start the examination.



**SECTION - I**

**Note :**

**(4x1=4M)**

- i) Answer all the following questions.
- ii) Each question carries 1 Mark.

1. What is the relation between temperature and the average kinetic energy of molecules ?
2. Is the direction of current induced in the coil constant guess the answer.
3. Water dissociate into two gases on passing electricity through it. Predict the names of the gases and write.
4. What is the shape  $\text{PH}_3$  ?

**SECTION - II**

**Note :**

**(5x2=10M)**

- i) Answer all the following questions.
- ii) Each question carries 2 Mark.

5. Draw the different types of convex and concave lens.
6. What is electromagnetic spectrum ?
7. What is the shape  $\text{PH}_3$  ?
8. Do you agree with the statement "All ores are minerals but all minerals need not to be ores"? Justify your answer.
9. What is thermite process ? Mention its applications in daily life.

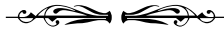
**SECTION - III**

**Note :**

**(4x4=16M)**

- i) Answer all the following questions.**  
**ii) Each question carries 4 Mark.**

10. (a) Inttore formation of rainbow is an example of dispersion of light. Explain ?  
(or)  
(b) Write the experimental method in verification of laws of reflection in plane mirrors.
11. (a) Rainbow is an example for continuous spectrum ? In our daily life where we observe Rainbow spectrum around us find out ?  
(or)  
(b) How do you appreciate the role of esters in daily life ?
12. (a) You have given some iron nails, a calorimeter and some other materials. By using these describe an activity to find the specific heat of iron nails.  
(or)  
(b) Explain the Nitrogen molecule by using valence bond theory ?
13. (a) Draw the rary diagrams of reflection of light in concave mirror, as an object placed at, and draw a table showing the nature of image.  
a) Beyond the centre of curvature (beyond C)  
b) At the centre of curvature (at C)  
c) In between focus point and centre of curvature (between F-C)  
d) In between pole of the mirror and focus point (between P-F)  
(or)  
(b) Draw the diagram of blast furnace and label it parts.



**MODAL PAPER - III****PHYSICAL SCIENCES -I****(ENGLISH MEDIUM)****PART A & B****Class : X****Max. Marks: 40****Time : 2.45 hr****Marks : 10****PART - B****Time : ½ hr****Note : Choose the correct answer.****(20x½=10M)**

14. You feel warm after you finish your bath under shower on a hot day. Which process is responsible for this ? ( )  
 a) Condensation    b) Evaporation    c) Freezing    d) Melting
15. Which of the following is the reverse process of evaporation ? ( )  
 a) Freezing    b) Melting    c) Condensation    d) Boiling
16. Dentists use the concave mirror, because ( )  
 a) it diverges the light    b) The size of the image is enlarged  
 c) it forms smaller images    d) it always forms virtual images
17. Ramya filled a glassy bottle with water and closed it with the help of this. She read the paper, guess how the bottle acted on ( )  
 a) Convex mirror    b) Convex lens    c) Concave mirror    d) Concave lens
18. If coloured light passing through any transparent medium retains its colour, because ( )  
 a) Speed of wave    b) Wave length  
 c) Frequency    d) Refractive index
19. While rainbow forms the sun light enters into the drop of water and gets total internal reflection, the resultant refractions are ( )  
 a) one time    b) Two times    c) Three times    d) Number of times
20. The reason for blue sky is due to the molecule ( )  
 a)  $CO_2$     b)  $N_2$     c)  $S_2$     d)  $Cl_2$
21. Match the following ( )
- | Group - I | Group - II         |
|-----------|--------------------|
| 1) Ampere | P) Volt / Ampere   |
| 2) Volt   | Q) Coulomb / sec   |
| 3) Watt   | R) Joule / Coulomb |
| 4) Ohm    | S) Volt x Ampere   |
- a) 1-Q, 2-R, 3-S, 4-P    b) 1-Q, 2-S, 3-R, 4-P  
 c) 1-P, 2-S, 3-R, 4-Q    d) 1-P, 2-R, 3-S, 4-Q

22. Which one of the following metals do not react with cold as well as hot water( )  
 a) Na                      b) Ca                      c) Mg                      d) Fe
23. Choose the set of matching answer ( )  
 1. Magnetic field line                      A) Direction of magnetic field lines  
 2. Electric motor                              B) North pole to South pole  
 3. Flemming left handule                      C) Pair of slip rings  
 4. Maxwell's right hand grip rule                      D) Direction of motion of a conductor in a magnetic field  
 a) 1-D, 2-A, 3-C, 4-B                      b) 1-B, 2-A, 3-C, 4-D  
 c) 1-B, 2-C, 3-D, 4-A                      d) 1-B, 2-A, 3-D, 4-C
24. Identify the acid and the base from which the salt sodium nitrate is obtained ( )  
 a) Acetic acid, sodium hydroxide                      b) Hydrochloric acid, Sodium hydroxide  
 c) Sulphuric acid, sodium hydroxide                      d) Nitric acid, Sodium hydroxide
25. Formula of Rock Salt is ( )  
 a)  $CuSO_4$                       b)  $Na_2SO_4$                       c)  $KCl$                       d)  $NaCl$
26. Match the following. ( )  

|                                     |     |                                |
|-------------------------------------|-----|--------------------------------|
| Set A                               |     | Set B                          |
| i) Principle quantum number         | ( ) | P) Shape of orbitals           |
| ii) Angular momentum quantum number | ( ) | Q) Electron spin               |
| iii) Magnetic Quantum number        | ( ) | R) Energy of Orbital.          |
| iv) Spin Quantum number             | ( ) | S) Orientation of orbitals     |
| a) (i) P (ii) R (iii) S (iv) Q      |     | b) (i) R (ii) P (iii) S (iv) Q |
| c) (i) S (ii) R (iii) P (iv) Q      |     | d) (i) Q (ii) S (iii) P (iv) R |
27. An element has three electrons in the 3rd shell, the atomic number of the element is ( )  
 a) 13                      b) 21                      c) 27                      d) 31
28. Match the following ( )  

|                                |     |                                |
|--------------------------------|-----|--------------------------------|
| Set A                          |     | Set B                          |
| i) s- block element            | ( ) | P) Chromium                    |
| ii) p- block element           | ( ) | Q) Cerium                      |
| iii) d- block element          | ( ) | R) Galium                      |
| iv) f- block element           | ( ) | S) Sodium                      |
| a) (i) P (ii) R (iii) Q (iv) S |     | b) (i) S (ii) R (iii) P (iv) Q |
| c) (i) S (ii) Q (iii) R (iv) P |     | d) (i) Q (ii) S (iii) P (iv) R |
29. An example of an ionic compounds is ( )  
 a)  $MgCl_2$                       b)  $NH_3$                       c)  $H_2O$                       d)  $BF_3$

30. The chemicals used for artificial ripening of fruits is ( )  
a) Ethene                      b) Ethane                      c) Ethyne                      d) Ethanol
31. Metals are refined by using different methods. Which of the following metals are refined by electrolytic refining ( )  
i) Au                      ii) Cu                      iii) Na                      iv) K  
a) i and ii                      b) i and iii                      c) ii and iii                      d) iii and iv
32. Which among the following gives white shiny finish to walls of a house ( )  
a)  $CaO$                       b)  $SO_2$                       c)  $CaCO_3$                       d)  $H_2O$
33. Hybridisation atomic orbitals was proposed by ( )  
a) Linus Pauling                      b) Mosely                      c) Lewis                      d) Kossel

