

## SOLID STATE AND SURFACE CHEMISTRY

Std. XII  
CHEMISTRY

Time: 30 mts  
Max.Marks: 25

- An ion leaves its regular site occupying a position in the space between the lattice sites is called
  - Schottky defect
  - Frenkel defect
  - Impurity defect
  - Vacancy defect
- A compound formed by elements A and B crystallizes in the cubic structure where A atoms are at the corners of a cube and B atoms are at the face centre. What is the formula of the compound?
  - AB
  - AB<sub>2</sub>
  - A<sub>2</sub>B
  - AB<sub>3</sub>
- What type of crystal ice is
  - molecular
  - ionic
  - metallic
  - covalent
- Crystal defect present in FeS crystal is
  - Frenkel defect
  - Schotky defect
  - Metal excess defect
  - Metal deficiency defect
- Which one of the following is optically isotropic
  - NaCl
  - CsCl
  - glass
  - rutile
- Smallest fundamental repeating portion of a crystal lattice is called
  - Crystallographic axes
  - Interfacial angles
  - Unit cell
  - Space lattice
- Coordination number in bcc structure is
  - 12
  - 8
  - 4
  - 6
- What is the effect of presence of Schottky defects on the density of a crystal?
  - increases
  - decreases
  - no change
  - all are possible.
- Number of edges present in a cubic structure is
  - 4
  - 8
  - 12
  - 6
- The wavelength of X-rays is in the order of
  - 10<sup>-8</sup> m
  - 10<sup>-8</sup> cm
  - 10<sup>-8</sup> nm
  - 10<sup>-8</sup> Å
- Ionic crystals are \_\_\_\_ in solid state.
  - conductors
  - semiconductors
  - insulators
  - superconductors
- Movement of colloidal particles in electric field is
  - Tyndal effect
  - Helmholtz double layer
  - Electrophoresis
  - Electro osmosis
- Curd belongs to \_\_\_\_ type colloid
  - gel
  - solution
  - emulsion
  - aerosol

14. Which is not a solid colloid
- a coloured glasses  
c paints
- b metallic solution  
d gems
15. Which is not a purification method of colloid
- a electro dialysis  
c ultrafiltration
- b dialysis  
d electro osmosis
16. Which of the following will scatter light
- a cream  
c  $\text{Fe}(\text{OH})_3$  precipitate
- b electrified sand  
d a mixture of  $\text{O}_2 + \text{N}_2$
17. Metallic colloids are usually prepared by
- a hydrolysis  
c peptisation
- b electro dispersion  
d mechanical dispersion
18. Which is not an electrical property?
- a Helmholtz double layer  
c Tyndall effect
- b electrophoresis  
d Electro osmosis
19. The silver colloid protected by gelatin is used as
- a insecticide  
c stomach disorder d ointment for eye
- b water purifier
20. Which do not pass through semipermeable membrane?
- a dispersion medium  
c electrolyte
- b dispersed phase  
d ions
21. Which is a lyophobic colloid?
- a gum in water  
c sulphur in water
- b sand in water  
d salt in water
22. Which method is used in the preparation of colloidal gold?
- a Mechanical dispersion  
c Bredig arc method
- b Peptisation  
d Hydrolysis
23. Stability of colloids can be explained by
- a Optical property  
c Electro osmosis
- b Electrical double layer phenomenon  
d Electrophoresis
24. The diameter of the suspension particles is
- a  $1 \text{ \AA} - 10 \text{ \AA}$   
c  $200 \text{ \AA} - 2000 \text{ \AA}$
- b  $10 \text{ \AA} - 200 \text{ \AA}$   
d above  $2000 \text{ \AA}$
25. Which of the following is not a colloid?
- a Egg  
c Ruby glass
- b Milk  
d Chlorophyll