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Chemistry Classes

JEE (Main & Advanced) • NEET • XI • XII



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### OBJECTIVE TYPE GUESS QUESTION - 2022

#### PHYSICAL CHEMISTRY

##### SOLID STATE [ 9 Ques ] :

- Good conductor of electricity and heat is  
(A) Anthracite coke (B) Diamond (C) Graphite (D) Charcoal
- Percentage of free space in bcc. unit cell is  
(A) 32% (B) 34% (C) 28% (D) 30%
- The co-ordination number of a metal crystallizing in hexagonal close packed (hcp) structure is  
(A) 12 (B) 8 (C) 4 (D) 6
- In which of the following pairs of structures are tetrahedral as well as octahedral voids respectively ?  
(A) bcc and fcc (B) hcp and simple cubic (C) hcp and ccp (D) bcc and hcp
- Which of the following point defects are shown by AgBr(s) crystals ?  
(i) Schottky defect (ii) Frenkel defect (iii) Metal excess defect (iv) Metal deficiency defect  
(A) (i) and (ii) (B) (iii) and (iv) (C) (i) and (iii) (D) (ii) and (iv)
- Which of the following oxides shows electrical properties like metals ?  
(A)  $\text{SiO}_2$  (B) MgO (C)  $\text{SO}_2$  (S) (D)  $\text{CrO}_2$
- Which of the following is an amorphous solid ?  
(A) Graphite (C) (B) Quartz Glass ( $\text{SiO}_2$ ) (C) Chrome Alum (D) Silicon Carbide (SiC)
- Which of the following is a crystalline solid ?  
(A) Diamond (B) Glass (C) Rubber (D) All of these
- In hcp unit cell, number of atoms is  
(A) 4 (B) 6 (C) 12 (D) 7

##### SOLUTION [ 11 Ques ] :

- Which of the following equations represents osmotic pressure ?  
(A)  $P = CRT$  (B)  $P = \frac{CT}{R}$  (C)  $P = \frac{RC}{T}$  (D)  $P = \frac{RT}{C}$
- Which of the following is the property of ideal solution ?  
(A) Obeys Raoult's law (B) Does not obey Raoult's law  
(C) Both (A) and (B) (D) None of these
- The boiling point of water decreases at high mountains because  
(A) Atmospheric pressure is low (B) Temperature is low  
(C) Pressute is high (D) More Air





13. Which of the following is a colligative property of solution ?  
(A) Osmosis (B) Surface Tension (C) Conductivity (D) Half-life period
14. By osmosis Semipermeable membrane (S.P.M.) allows to pass  
(A) Solute molecules (B) Solvent molecules (C) Complex ion (D) Simple ion
15. Which is not affected by temperature ?  
(A) Normality (B) Molality (C) Molarity (D) Formality
16. A 5% solution of canesugar (molar mass = 342) is isotonic with 1% solution of a substance X. The molar mass of X is  
(A) 171.2 (B) 68.4 (C) 34.2 (D) 136.2
17. Which of the following aqueous solution should have the highest boiling point ?  
(A) 1.0 M NaOH (B) 1.0 M Na<sub>2</sub>SO<sub>4</sub> (C) 1.0 M NH<sub>4</sub>NO<sub>3</sub> (D) 1.0 M KNO<sub>3</sub>
18. The van't Hoff's factor of 0.1 M Ba(NO<sub>2</sub>)<sub>2</sub> solution is 2.74. The degree of dissociation is  
(A) 91.3% (B) 87% (C) 100% (D) 74%
19. A solution has an osmotic pressure of 0.0821 atm. at 300 K. Its concentration would be  
(A) 0.66 M (B) 0.32 M (C) 0.066 M (D) 0.033 M
20. Azeotropic mixture of HCl and H<sub>2</sub>O has  
(A) 48% HCl (B) 22.2% HCl (C) 36% HCl (D) 20.2% HCl



### ANSWER KEY

#### 12TH BOARD GUESS QUES. 2022 (Objective Type)

##### PHYSICAL CHEMISTRY :

01. C	02. A	03. A	04. A	05. A	06. D	07. B	08. A	09. A	10. A
11. A	12. A	13. A	14. A	15. B	16. B	17. B	18. B	19. D	20. D

