

# Guess Paper - 2015

## Class – XII

### Subject – Chemistry

**Note :- Attempt all Questions.**

**MM 20**

- 
- Q-1 Classify as being either a p-type or n-type semiconductor (2)  
 (i) Ge doped with In (ii) B doped with Si
- Q-2 Explain ZnO is white, on heating it becomes yellow. (2)
- Q-3 Out of simple. B.C.C. and C.C.P. which one has highest packing efficiency (2)
- Q-4 Analysis shows that nickel oxide has formula  $\text{Ni}_{0.98}\text{O}_{1.00}$  what fraction of the nickel exists as (2)  $\text{Ni}^{++}$  and  $\text{Ni}^{3+}$
- Q-5 Why soda water bottle fizzes out when cap is opened. (2)
- Q-6 What would be the value of Vant's Hoff factor for a dilute solution of  $\text{K}_2\text{SO}_4$  in water. (2)
- Q-7 An antifreeze solution is prepared from 222.6g of ethylene glycol (2)  $\text{C}_2\text{H}_4(\text{OH})_2$  and 200g of water. Calculate the molality of the solution. If the density of this solution be  $1.072\text{gml}^{-1}$ . What will be the molarity of solution.
- Q.8 Write short notes on micelle and shape selective catalyst with example (2)
- Q.9 Calculate the emf of the cell (2)  
 $\text{Mg} / \text{Mg}^{2+}(0.001\text{M}) // \text{Cu}^{2+}(0.001\text{M}) / \text{C}$   
 $\text{Cu}^{2+}/\text{Cu} = 0.34$  ;  $\text{Mg}^{2+}/\text{Mg} = -2.375$
- Q.10. what is the difference between physisorption & chemisorptions (2)
- Q.11. A certain reaction is 50% complete in 20 min at 300K and the same reaction is again 50% complete in 5 min at 350K. Calculate the activation energy if it is a first order reaction. (2)  
 ( $R = 8.314\text{J K}^{-1}\text{ mol}^{-1}$ ,  $\log 4 = 0.602$ )
- Q.12 The rate constant for the first order decomposition of  $\text{H}_2\text{O}_2$  is given by the (2)  
 Following equation  $\log k = 14.34 - 1.25 \times 10^4 / \text{K.T}$ . Calculate  $E_a$  for this reaction and at what temperature will its half-life be 256 minutes.

**DR. ANUJ SHARMA**

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## DON & DONNA CONVENT SHAHJAHANPUR

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