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**Shri Shantadurga Higher Secondary School, Bicholim-Goa.****First Formative Examination August-2018****Std: XII Science****Marks: 20****Date: 11/08/2018****Chemistry****Time: 1 Hr**

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**Instructions:-**

- (1) All questions are compulsory; however **Q. 5** and **Q.10** have internal choice.  
(2) Section-A consists of 4 questions of 1 mark each.  
Section-B consists of 3 questions of 2 marks each.  
Section-C consists of 2 questions of 3 marks each.  
Section-D consists of 1 question of 4 marks.  
(3) Use Log Tables, if necessary. Use of calculators is not allowed.
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**Section-A**

- Q.1. When sodium chloride is heated in vapours of sodium, the colour changes because of. \_\_\_\_\_ (1)

# excess of sodium ions                      # electron trapped in anionic sites  
# excess of chloride ions                      # excess of salt

- Q.2 The IUPAC name of  $\text{CH}_3-\text{C}=\text{C}-\text{CH}_3$  is \_\_\_\_\_ . (1)



# 2,3 – bromo methyl but-2-ene                      # 2- bromo- 3-methyl but-2-ene  
# 3-bromo-2-methyl but-3-ene                      # 2-bromo -3- methyl but-3-ene

- Q.3. For the reaction; (1)



The rate of reaction in terms of appearance of  $\text{NO}_2$  is \_\_\_\_\_ .

#  $-4 \frac{\Delta[\text{NO}_2]}{\Delta t}$                       #  $\frac{1}{4} \frac{\Delta[\text{NO}_2]}{\Delta t}$                       #  $-\frac{1}{4} \frac{\Delta[\text{NO}_2]}{\Delta t}$                       #  $4 \frac{\Delta[\text{NO}_2]}{\Delta t}$

- Q.4. Name any two methods used in **concentration** of an **ore**. (1)

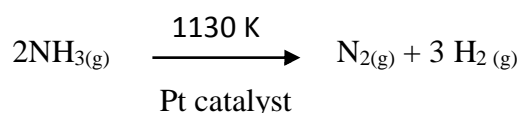
**Section-B**

- Q.5. The rate of reaction doubles when the temperature changes from  $27^\circ\text{C}$  to  $37^\circ\text{C}$ . Calculate the energy of activation for the same. ( $R= 8.314 \text{ JK}^{-1}\text{mol}^{-1}$ ) (2)

**OR**

- Q.5. The decomposition of a compound is found to follow first order rate law. If it takes 15 minute for 20% of original material to react. Calculate the specific **rate constant**. (2)

- Q.6. Identify and write the **order** of reaction for the following reaction. (2)



Also derive integrated rate equation for the same.

- Q.7. Draw a neat labelled diagram showing **Froth floatation process** used in concentration of an ore. What is the role of **collectors** used in this process? (2)

### Section-C

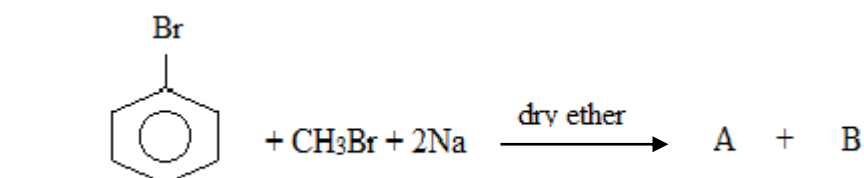
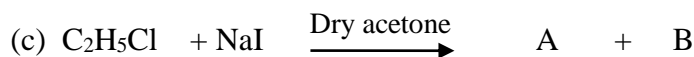
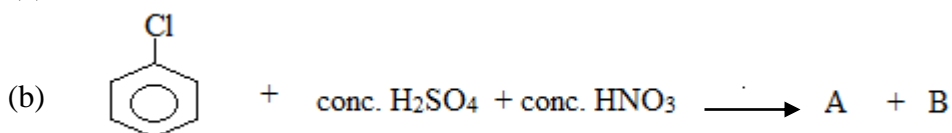
- Q.8. Name the following. (3)
- One substance that acts as both **Antiseptic** and **Disinfectant**
  - Type of medicine used for getting relief from **pain**
  - Cationic detergent that is used as **hair-conditioner**.
- Q.9. With respect to **Face Centred cubic** unit cell, answer the following questions. (3)
- Draw the structure
  - Calculate the total number of atoms per unit cell.
  - Write one point of difference with BCC unit cell.

### Section-D

- Q.10. Write the complete reaction for the following **conversions**: (4)
- Benzene diazonium chloride to iodobenzene.
  - Pent-2-ene to 2,3-dibromopentane.
  - Chlorobenzene to 1-chloro-4-nitrobenzene
  - Bromopropane to propanamine

### OR

- Q.10. Complete the following chemical reaction: (4)



\*-----THE END-----\*