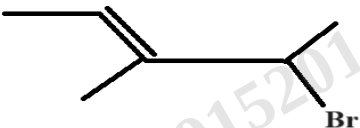


Th-2 Engineering Chemistry

Full Marks: 80

Time- 3 Hrs

Answer any five Questions including Q No.1& 2
 Figures in the right hand margin indicates marks

1. Answer **All** questions 2 x 10
 - a. State Faraday's 2nd law of electrolysis.
 - b. What is calorific value of fuel?
 - c. To which class the compound C₅H₈ belongs and why?
 - d. Write the electronic configuration Cu.
 - e. Define isobar. Give a suitable example of it.
 - f. What do you mean by ferroalloy? Give an example of ferroalloy.
 - g. Define saturated hydrocarbon.
 - h. Define double salt. Give an example complex salt.
 - i. What is a molal solution?
 - j. What are insecticides?
 2. Answer **Any Six** Questions 6 x 5
 - a. Explain the gravity separation method of concentration of ores.
 - b. 500 ml of an aqueous solution contains 2.85 gm of MgCl₂. Calculate normality of the solution.
 - c. Give the IUPAC names/structural formulae of the following compounds.
 - (i) 4-Chloro-3-methylhex-4-en-2-ol
 - (ii) 3-Bromopenta-1,3-dien-2-ol
 - (iii) 
 - (iv)
$$\begin{array}{ccccccc} & & & \text{CH}_3 & & & \\ & & & | & & & \\ \text{CH}_3 & - & \text{CH} = & \text{C} & - & \text{CH} & - & \text{CH}_3 \\ & & & | & & & \\ & & & \text{OH} & & & \end{array}$$
 - (v) CH₃CH(Br)CH=C(Cl)CH₂CH₃
 - d. Find the pH of 0.01M H₂SO₄ solution.
 - e. Write down the purposes of lubrication.
 - f. Define and explain vulcanisation of raw rubber.
 - g. Define coordinate bonding. Explain the formation of ammonium ion.
- Answer Any Three Questions**
- 3 (a) Write down the conditions of aromaticity. 5
 - (b) Write down the composition and uses of PVC. 5
 - 4 (a) State and explain Aufbau principle. 5
 - (b) Explain the importance of P^H in paper industries. 5
 - 5 (a) Write down the composition and uses of LPG. 5
 - (b) What are the advantages of vulcanized rubber over raw natural rubber? 5
 - 6 (a) Define Bronsted-Lowry theory of acids and bases with examples. 5
 - (b) Distinguish between thermoplastics and thermosetting. 5
 - 7 (a) Write down the functions of calcinations during metallurgical operation. 5
 - (b) Explain protection of corrosion by Galvanisation. 5