

2ND SEM . / COMMON / 2023(S) NEW

Th- 2 (b) Engineering Chemistry

Full Marks: 80

Time- 3 Hrs

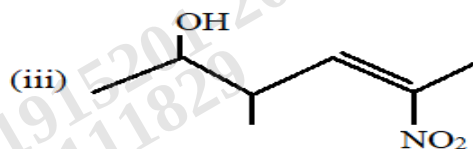
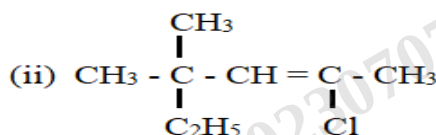
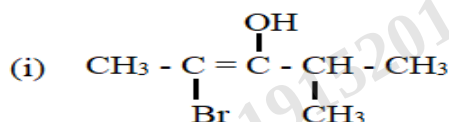
Answer any five Questions including Q No.1& 2
Figures in the right hand margin indicates marks

1. Answer All questions 2 x 10

- a. What is gangue?
- b. Define isotone. Give a suitable example of it.
- c. What do you mean by neutralisation reaction? Give an example of it.
- d. Define homopolymer. Give an example of it.
- e. What is calorific value of fuel?
- f. Define electrovalent bond.
- g. Define hard water. What is the cause of hardness of water?
- h. Write down the general formulae of alkane and alkene.
- i. What are herbicides? Give an example of herbicide.
- j. Define P^H . What is the range of P^H for acidic solutions?

2. Answer Any Six Questions 6 x 5

- a. Explain the mechanism of rusting of iron.
- b. Write down the IUPAC names/structural formulae of the following:



(iv) 5-Bromo-3-chlorohex-4-en-3-ol

(v) 2,4-Dimethylpenta-1,3-diene

- c. What are the advantages of hot lime soda process over cold lime soda process?
- d. Define and explain Hund's rule.
- e. 2.45 g of H_2SO_4 is present in 2 litres of its solution. Calculate its molarity and normality.
- f. Explain magnetic separation method of concentration of ores.
- g. Define and explain Arrhenius theory of acids and bases.

3	(a) State Bohr-Bury scheme.	5
	(b) Explain electrolysis of molten NaCl and predict the products obtained at different electrodes.	5
4	(a) Write down the composition and uses of alnico and duralumin.	5
	(b) Distinguish between aliphatic and aromatic hydrocarbons.	5
5	(a) Give a brief note on composition and uses of Bakelite.	5
	(b) Define and explain vulcanisation of natural rubber.	5
6	(a) 12 g of NaOH is present in 1.5 lit of its solution. Find P^H of the solution.	6
	(b) Define with examples acidic and basic salts.	4
7	(a) Write down the composition and uses of producer gas and water gas.	4
	(b) What are the outcomes of Rutherford's gold foil experiment?	6