UG (CBCS) Even Semester Examination, May 2025

EDUCATION
(B.Sc. B.Ed.)

2nd Semester

Course No. : BSCH - 202

(General Chemistry)

Full Marks : 50
Pass Marks : 20

Time : 2 hours

The figures in the margin indicate full marks for the questions

(*Answer five questions*)

1. (a) Selecting two kr compounds of your choice, state their preparatory route. 3+3=6

   (b) Explain four prominant properties of HOCl. 4

Or

2. (a) Describe the preparation and properties of Hydroxylamine. 2+3=5

   (b) Write a note on oxides of nitrogen. 5

3. Give examples of four interfering anions. Selecting any two of your choice, explain the removal procedure of the interfering anions concerned. 4+3+3=10

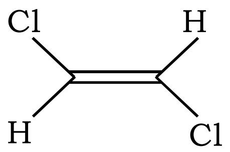
Or

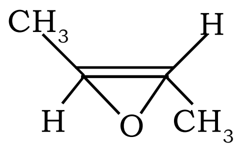
4. What do you mean by gravimetric analysis? With a suitable example describe the procedure of gravimetric analysis. 2+2+6=10

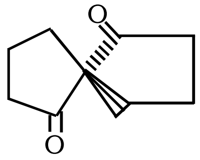
(Turn Over)

5. (a) Locate the symmetry elements present in

(i) C_2H_2 (ii) $CHCl_3$

(iii) 

(iv) 

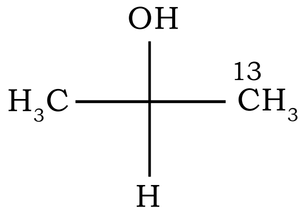
(v) 

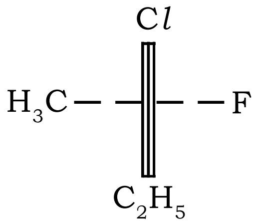
5x2=10

Or

6. (a) What do you mean by diastereomers? Give two example of the same. 2+2=4

(b) Determine the R/S nomenclature in the following compounds : 1+1=2

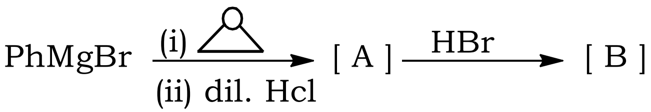
(i) 

(ii) 

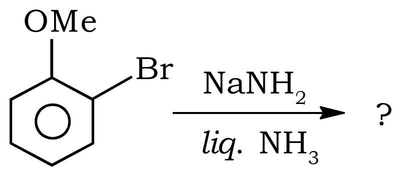
(c) Draw the Fischer prjection formulae D(+) Glucose and transform it to Flying Wedge form. 2+2=4

7. (a) How will you distinguish between primary, secondary and tertiary alcohols? 6

(b) Identify the products A and B. 2+2=4



Or

8. 

Predict the intermediates and final products. 10

9. (a) Define heat of formation and heat of neutralization. 2+2=4

(b) The heats of oxidation of magnesium and iron are given :

(a) $Mg + \frac{1}{2}O_2 = MgO, \quad \Delta H = -145700$ Cal

(b) $2\,Fe + \frac{3}{2}O_2 = Fe_2O_3, \quad \Delta H = -193500$ Cal

Calculate the heat produced in the reaction :

$3\,Mg + Fe_2O_3 = 3\,MgO + 2\,Fe$

Or

10. Write notes on hardware and software components of computer. 5+5=10

★★★