6th Sem Internal Assessment Examination

Paper: DSE 3 **FM: 10**

1. Answer any two:

(2.5 x 2 =5)

a) Al crystallize with FCC, Interionic distance (shortest) in a unit cell of Al is 2.86 A^0. Calculate density of Al. (At wt. of Al =27)

b) Find out the distance between two planes (d_{hkl}) for an orthorhombic lattice.

c) What is the highest order that can be observed in Bragg's reflection from a solid by X-ray?
Crystal plane intercepts three crystallographic axis at following multiples of unit cell distance 3/2, 2,1. What will be the Miller Indices of the plane?

2. Answer any two:

(2.5 x 2 = 5)

a) Explain different types of ensembles.

b) What do you mean by thermodynamic weight? Write the expressions of thermodynamic weight for both non-degenerate and for degenerate cases.

c) What do you mean by phase space? Define 'μ-space' and 'Γ-space'.

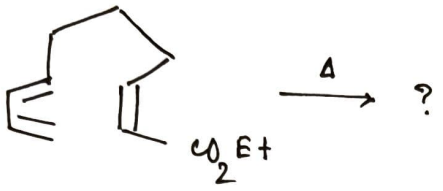
KANDI RAJ COLLEGE

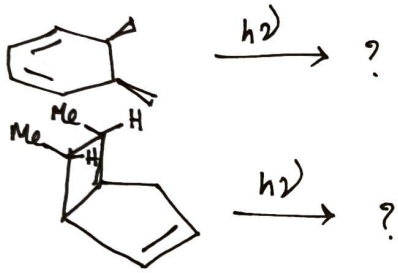
Dept. of. Chemistry
Sub: Organic Chemistry
Paper : CHEMHT-14.

Total Marks : 10

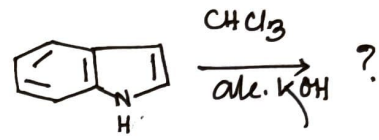
Answer the following questions —

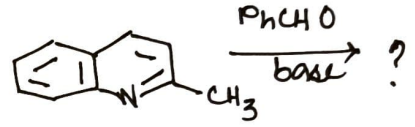
1. Predict the pdt(s) of following questions (any 5): 1×5 = 5.

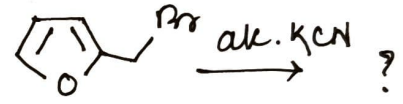
a. 

b. 

c.

d. 

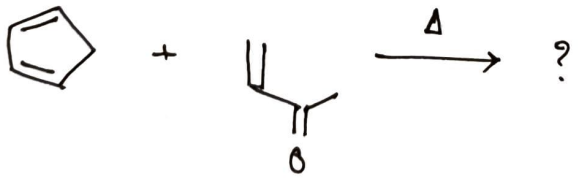
e. 

f. 

[N.B. – Mechanism is not required]

2. Explain why furan and pyrrole has opposite direction of dipole moment. 2.

3. With appropriate FMO diagram predict the pdt(s) of following reaction — 3.



Internal Assessment

Inorganic Question(CC13) Full Mark 10

Answer any five question

1) Explain why H2O is strong field than OH^- ion.

2) Explain why $[Co(NH_3)_6]^{3+}$ is less intense in color than $[Co(NH_3)_5X]^{2+}$

3) Explain why all Cr-F or Mn-F bond distance in CrF_2(solid) or MnF_3(solid) are not equal.

4) Draw the crystal field splitting of d-orbital in square pyramidal geometry.

5) What do you mean by Δ_o or $10Dq_o$ and $\Delta_o=0$ and $\Delta=0$.

6) The $Cu(CH_3COO)_2]. H_2O$ behaves as diamagnetic compound. Explain.

7) Draw the active site structure of carbonic anhydrase and carboxypeptidase.