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(2063)

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B. Pharmacy (Ayurvedic) 2nd Semester Examination
Pharmaceutical Chemistry (Inorganic Chemistry)

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Time : 3 Hours

Max. Marks : 90

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : (i) Attempt any five questions in all. Question no. 1 is compulsory.

(ii) Each question will carry 15 marks.

1. Attempt the following:

- (a) Explain walden inversion with example.
- (b) Explain why o-nitrophenol is steam volatile where p-nitrophenol is not steam volatile.
- (c) Why nitration of toluene is easier than that of benzene.
- (d) Explain sucrose is dextro-rotatory where as its hydrolysis product is laevo-rotatory.
- (e) What is the decreasing order of stability in following radicals:

CH_3 , CH_3CH_2 , $(\text{CH}_3)_3\text{C}$ $(\text{CH}_3)_2\text{CH}$ **(6×3)**

2. (a) How will you differentiate primary, secondary and tertiary amine.

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[P.T.O.]

- (b) Explain geometric isomerism with respect to alkenes.
- (c) Discuss the mechanism of Hydriboration oridation of alkene. **(3×6)**
3. (a) What is fries rearrangement? Discuss its mechanisms.
- (b) Discuss hydrogenbarding in detail with explain.
- (c) What do you know about Hyperconjugation. Discuss. **(3×6)**
4. (a) What is exhaustive methylaton? Discuss Hafmann elimination.
- (b) How is nicotine extracted from tobacco leaves?
- (c) How will you synthesis caffeine from uric acid? **(3×6)**
5. Give the reaction mechanism of the following:
- (a) Cannizzaro reaction
- (b) Carbylamine reaction
- (c) Clausen condensation reaction. **(3×6)**
6. Give the bicsynthesis of cholic acid and Lithochalic Acid. **(18)**
7. An organic compound was found to contain C = 79.25%; H=5.66%, its vapour density was 53. It has a characteristic smell and an oxidation with KNO_4 it gave an acid, the sodium salt of which on distillation with soda lime gave benyene. What is the original compound. **(18)**