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X—30—2019

FACULTY OF SCIENCE

B.Sc. (Third Semester) (Regular) EXAMINATION

OCTOBER/NOVEMBER, 2019

CHEMISTRY

Paper-VI

(Organic and Inorganic Chemistry)

(Wednesday, 16-10-2019)

Time : 2.00 p.m. to 4.00 p.m.

Time—2 Hours

Maximum Marks—40

N.B. :— Attempt all questions.

1. Solve any *three* of the following : 3×5=15
 - (a) Explain the separation of $2n^{++}$ and Mn^{++} with necessary chemical reaction.
 - (b) Why is water known as universal solvent ? Explain viscosity property of solvent.
 - (c) How is sodium carbonate extract prepared ? Explain its role in qualitative analysis.
 - (d) Explain neutralisation reaction in liq NH_3 and liq SO_2 .
 - (e) Explain the use of 1, 10-phenanthroline and dimethyl glyoxime reagents in qualitative analysis.
2. Solve any *three* of the following : 15
 - (a) Explain koevenagel reaction with mechanism.
 - (b) Explain Gattermann Koch reaction for the preparation of benzaldehyde with mechanism.

P.T.O.

- (c) How will you synthesise Anthranilic acid by :
- (i) Phthalimide
 - (ii) O-nitro Toluene.
- (d) What are organolithium compounds ? How will you obtain the following from methyl lithium :
- (i) Methane
 - (ii) Ethanol.
- (e) How will you convert :
- (i) Fats and oils to Alcohol
 - (ii) Fats and oils to Ester.
3. Solve any *two* of the following : 10
- (a) Explain Baeyer Villiger oxidation with mechanism.
 - (b) What is the action of the following on Benzoic acid :
 - (i) LiAlH_4
 - (ii) Conc. HNO_3 + Conc. H_2SO_4 .
 - (c) Give any *three* synthetic applications of Ethyl Acetoacetate.
 - (d) What are Soaps ? Explain manufacture of soaps by Kettles process.