



H-303004

Seat No. _____

M. Sc. (Sem. III) Examination

November - 2022

MSC1C304 : Industrial Chemistry

(New Course)

Time : 3 Hours]

[Total Marks : 70

- Instructions :** (1) All questions are compulsory.
(2) Figures to the right side indicate total marks of the questions.

- 1** (a) Write a note on batch v/c continuous operations. **7**

OR

Write a note on importance of "flow-chart" in industry.

- (b) Write a note on safety rules of fire and handling of hazardous chemicals. **7**

OR

Discuss the importance of patents in R & D.

- 2** (a) Write a note on halogenations. Give importance of chlorination for operation of Intermediates. **7**

OR

Discuss sulphonation of α -Naphthol, β -Naphthalene and at various Concentration of H_2SO_4 and temperature.

- (b) Write a brief note on alkylation reaction. **7**

OR

Discuss amination by reduction and ammonolysis.

- 3** (a) Write a brief note on 12 principles of green chemistry. **7**

OR

Write a note on Ionic liquid as a green solvent.

- (b) Discuss witting - Horner and Wurtz reaction on the basis of green chemistry. **7**

OR

Give brief introduction of green catalysts of green reagent.

- 4 (a) What is agrochemicals ? Write a note on insecticides and pesticides. 7

OR

Discuss various types of filtration.

- (b) Write a note on plant nutrients and hormones. 7

OR

Discuss note on extraction and solid handling.

- 5 Answer the following in brief : 14

- (1) Reaction between water and $\text{con.H}_2\text{SO}_4$ is exothermic or endothermic ?
 - (2) What is Nitrating agent ?
 - (3) Which materials are toxic when burned ?
 - (4) What are the three stages in chemical process ?
 - (5) Which reagent is used in friedel-craft reaction ?
 - (6) What are good Michael donors ?
 - (7) What is GLP and GMP ?
 - (8) What is meant by green chemistry ?
 - (9) What is the product of Diels-Alder reaction ?
 - (10) What is Wurtz reaction ?
 - (11) What is pesticides ?
 - (12) What is Weedicide ?
 - (13) What is fungicide used for ?
 - (14) What is the best plant nutrient ?
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