



S-303004

Seat No. _____

M. Sc. (Sem. III) Examination

November / December - 2020

MSCIC-304 : Industrial Chemistry : Paper-4

(New Course)

Time : 2 Hours]

[Total Marks : 50

- Instructions :** (1) Answer only **three (3)** questions.
(2) The examination will be for **two (02)** hours.
(3) Q. No. **9** is **compulsory** and carries **14** marks.
(4) Answer any **two** questions from questions
No. 1 to 8. Each question carries **18** marks.

- 1 (a) Write a note on safety rules and handling of hazardous chemicals.
(b) Write a note on batch operation and continuous operation with its importance.
- 2 (a) Write a note on patent and its importance.
(b) What is R&D ? Give its importance in chemical industry.
- 3 (a) Discuss the sulfonation reaction and its importance in chemical industry.
(b) Discuss the amination by ammonolysis and reduction.
- 4 (a) Discuss the nitration reaction and its application in dyes industry.
(b) Write a brief note on halogenation and its importance in chemical industry.
- 5 (a) Discuss ionic liquid as green solvent in green chemistry.
(b) Write a note on O-alkylation and N-alkylation.
- 6 (a) Write a brief note on green chemistry.
(b) Discuss Michael and Diels Alder reaction on the basis of green chemistry.

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[Contd...

- 7 (a) Write a note on insecticide and pesticides.
(b) Discuss various types of distillation.
- 8 (a) Write a note on extraction and solid handling.
(b) Write a note on plant nutrients and hormones.
- 9 Answer the following questions :
- (1) Define GLP & GMP.
 - (2) What is unit operation ?
 - (3) What is weedicide ?
 - (4) What is agrochemicals ?
 - (5) Give reaction of nitration.
 - (6) What is NPPC ?
 - (7) What is ANSI ?
 - (8) What is NFPA ?
 - (9) Give example of exothermic reaction.
 - (10) What is green solvent ?
 - (11) Give reaction of Diels Alder reaction.
 - (12) Give three names of explosives.
 - (13) What is fungicide.
 - (14) Give example of natural insecticides.
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