



**G-143004**

Seat No. \_\_\_\_\_

**M. Sc. (Organic Chemistry) (Sem. III) Examination**

**April / May - 2019**

**MSCOC304 : Industrial Chemistry**

Time : 3 Hours ]

[ Total Marks : 70

**Instruction :** Figures to right indicate full marks

- 1 (a) Give brief note on toxic chemicals in industry. 7

**OR**

- (a) Discuss the importance of patents in R & D.

- (b) Discuss the importance of flow chart. 7

**OR**

- (b) Give brief note on hazardous chemicals and their safety.

- 2 (a) Discuss the factors affecting on nitration reaction. 7  
Give importance of nitration for preparation of dye intermediates.

**OR**

- (a) Give five different methods of sulphonation and five chemicals' names, structure and their application

- (b) Write brief note on factors affecting on animation. 7  
Discuss animation by reduction and ammonolysis.

**OR**

- (b) Write a note on halogenation. Give importance of chlorination for preparation of intermediates.

- 3 (a) What is aqueous phase reaction? Discuss Wurtz reaction 7  
and Michel reaction on the basis of green chemistry.

**OR**

- (a) What is solid phase reaction? Discuss halogenation and Grignard reaction on the basis of green chemistry.

- (b) What is ionic liquid ? Discuss hydrogenation and Diels Alder reaction on the basis of green chemistry. 7

OR

- (b) Give brief introduction of green catalysts of green reagent.

- 4 (a) Write a note on insecticides and pesticides. 7

OR

- (a) Discuss various types of filtration.

- (b) Write a note on weedicides and fungicides. 7

OR

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

- 5 Answer the following questions : 14

- (i) How will you separate aniline from mixture of aniline-cresol?
- (ii) What is the importance of packing and labelling in GMP?
- (iii) Which two types of errors are seen during GLP.
- (iv) Give differences between Batch and Continuous operation.
- (v) What is unit process?
- (vi) What is unit operation?
- (vii) Give reaction of soda-lime with pyridine and quinoline.
- (viii) Give synthesis of RDX.
- (ix) What is green chemistry?
- (x) Why grinding is required in industry?
- (xi) Write criteria of solvent selection for crystallization.
- (xii) Define agrochemical.
- (xiii) Define exothermic reaction.
- (xiv) Give example of absorption.