

M.Sc. Semester-III, Examination, *APRIL-2015*
Organic Chemistry, Paper IX, Industrial Chemistry, Subject Code: 3487

Time: 2.5 hrs]

[Marks: 70

N.B. (i) Attempt all questions.

(ii) All questions carry equal marks

- Q.1. Answer the following: 14
(a) Define: Filler, plasticizer, antioxidants, HDP and LDP with respect to polymer chemistry.
(b) What is free radical addition polymerization? Explain the mechanism of free radical addition polymerization with suitable illustrations.

OR

- Q.1. Answer the following: 14
(a) What are fibers? Define – Natural fibers, semi-synthetic fibers and true fibers with proper illustrations.

(b) Give the name of various nylons and describe the manufacture of nylon 6,6.

- Q.2. Discuss manufacture of any three important members of aromatic cut from petroleum. 14

OR

- Q.2. Discuss the manufacture of any three members of C_3 cut from petroleum. 14

- Q.3. Explain the terms: Unit processes and unit operations. Discuss in detail nitration as unit process in organic industries. 14

OR

- Q.3. Introduce the terms: Unit processes & Unit operations. Discuss the mechanism and applications of amination as unit processes in organic industries. 14

- Q.4. Answer the following: 14

1. What are insecticides? Give the classification of insecticides on the basis of their mode of action. Give brief account on: Natural occurring insecticides.

2. Give synthesis and usefulness of trifluratin and dithiocarbamates.

3. Explain the role of vehicle, odoriferous substances and fixatives with suitable examples in perfumery industries.

OR

- Q.4. Answer the following: 14

1. Give brief account of: Acid lead arsenate, Tricalcium arsenate and paris green.

2. Give synthesis and uses of TEPP and bladafun.

3. Discuss the synthesis and usefulness of artificial musks class of compounds used in perfumery industries.

- Q.5. Answer the following: 14

(a) Describe manufacture of raw sugar from sugar-cane.

(ii) Explain: Patents as IP Tool for the protection of an invention .

OR

- Q.5. (a) Write notes on: HFCS and uses of Bagasse. 7

(b) Answer the following: 7

(i) Explain the benefits of patenting system.

(ii) Explain: Geographical indications.