

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV(New) • EXAMINATION – WINTER 2016****Subject Code:2143607****Date:18/11/2016****Subject Name:Unit Processes in Organic Synthesis****Time:02:30 PM to 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

MARKS

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|------------|---|-----------|
| Q.1 | Short Questions | 14 |
| | 1 Define the term: Hydrogenation | |
| | 2 Draw the structure of Anisol. | |
| | 3 What is meant by mixed acids? | |
| | 4 Give the structure of cellosolve. | |
| | 5 Name any two chlorinating agents. | |
| | 6 Define the term: Oligomer | |
| | 7 Give IUPAC name of Phenetol. | |
| | 8 Draw the structure of RDX. | |
| | 9 Give two names of polymerization techniques. | |
| | 10 Give the reaction of acid catalysed hydrolysis of ethyl acetate. | |
| | 11 Give the IUPAC name of Cellosolve. | |
| | 12 What do you understand by gel effect? | |
| | 13 Give only two name of natural polymer. | |
| | 14 What is absolute alcohol? | |
| Q.2 | (a) Write a note on: Oxynitration | 03 |
| | (b) Enlist various agents used in aromatic Oxidation | 04 |
| | (c) Explain Electrophillic Aromatic Substitution reaction with special emphasis on Friedel Craft Alkylaton and Acylation. | 07 |
| | OR | |
| | (c) Differentiate sulphonation and sulphation. Explain sulphation of lauryl alcohol with important uses. | 07 |
| Q.3 | (a) Explain Van't Hoff factor with example. | 03 |
| | (b) Describe method of preparation and use of Phenacetin. | 04 |
| | (c) With a neat process flow diagram, describe the manufacture of Benzene. | 07 |
| | OR | |
| Q.3 | (a) Write a note on: PETN | 03 |
| | (b) Difference between Thermoplastic and Thermosetting Polymer with example. | 04 |
| | (c) Explain in detail 'Ease of Esterification' and 'Transesterification' | 07 |
| Q.4 | (a) Write a note on: Saccharine. | 03 |
| | (b) Explain unit process for Halogenation with suitable example | 04 |
| | (c) Explain unit process for alkylation with industrial applications. | 07 |
| | OR | |
| Q.4 | (a) Define the term Alcoholysis with example. | 03 |
| | (b) Explain DVS calculation with one example. | 04 |
| | (c) Define the term Polymerization. Explain types of polymerization with example. | 07 |

- Q.5** (a) Give manufacture of any one : Hexyl resorcinaol **03**
(b) Write a short note on alkali hydrolysis. **04**
(c) What is amination by reduction? Discuss various chemical and physical factors affecting an amination by reduction. **07**

OR

- Q.5** (a) Explain Liquid phase oxidation in details. **03**
(b) Write a note on: Bulk Polymerization. **04**
(c) Write a note on synthesise of Acetic acid with net diagram. **07**
