

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2018****Subject Code:2140506****Date:01/12/2018****Subject Name:Chemical Process Industries -II****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.
4. Draw neat diagram where necessary.

MARKS

- Q.1** (a) Write the application of vat dyes by giving example. **03**
 (b) Explain Nitroso dyes with proper example. **04**
 (c) How Nitro benzene is prepared from benzene? Explain with flow diagram. **07**
- Q.2** (a) Give a list dye-intermediates derived from benzene. **03**
 (b) Give the uses of (a) Disperse dyes (b) Fluorescent dyes **04**
 (c) Discuss method of production of Indanthrene yellow dye. **07**
- OR**
- (c) Describe in detail manufacture of H-acid from KOCH acid with chemical reaction and neat clean flow diagram. **07**
- Q.3** (a) Write complete chemical reaction for manufacture of vat dyes. **03**
 (b) Discuss structure of dye. **04**
 (c) Discuss the manufacture of aniline from crude nitrobenzene with chemical reaction and neat & clean flow diagram. **07**
- OR**
- Q.3** (a) Give the uses of salicylic acid & methyl Salicylate. **03**
 (b) Write down complete chemical reaction for Thiamine hydrochloride. **04**
 (c) What is an antibiotic? Discuss manufacture of penicillin with neat & clean flow sheet. **07**
- Q.4** (a) Write complete chemical reaction for Riboflavin. **03**
 (b) Write structure formula: (a) Hexyl resorcinol (b) codeine **04**
 (c) Explain beer manufacture with a suitable flow diagram. **07**
- OR**
- Q.4** (a) List the various separation routes to produce absolute alcohol. **03**
 (b) What is inversion of sugar? How it can be prevented? **04**
 (c) With a detailed flow sheet explain the manufacturing process of sugar from sugarcane. **07**
- Q.5** (a) Explain in brief: Various ways of bagasse disposal. **03**
 (b) What are industrial coatings? Explain its applications in brief. **04**
 (c) What is fermentation? Discuss manufacture of industrial alcohol by aerobic fermentation process. **07**
- OR**
- Q.5** (a) What is paint and P.V.C of paint? **03**
 (b) What are pigments? Write in brief on red pigments. **04**
 (c) Explain the manufacturing process of Lithopone with proper diagram. **07**
