

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V (NEW) EXAMINATION – WINTER 2018****Subject Code:2153604****Date:20/11/2018****Subject Name:Technology of Intermediate & Colorants****Time: 10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

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

	MARKS
Q.1 (a) How do you differentiate unit processes and unit operations in detail.	03
(b) Discuss about DVS ratio used in Nitration Reaction.	04
(c) Discuss the best practices for following unit operations: (i) Isolation (ii) Blending (iii) Filtration (iv) Grinding	07
Q.2 (a) Write a note on: Ammonolysis.	03
(b) Discuss the Biazzzi reactor with respect to hydrogenation technology.	04
(c) Explain the Sulphonation Process Technology with suitable example.	07
OR	
(c) Explain the Chlorination Process Technology with suitable process diagram.	07
Q.3 (a) Write a note on: Centrifuge filtration.	03
(b) Discuss the properties of evaporating liquid that influence the evaporation process.	04
(c) Explain the stirring apparatus with its importance, uses & difficulties during different equipment used.	07
OR	
Q.3 (a) Discuss the concept of bumping.	03
(b) Write about agitation system and particle size reduction.	04
(c) Explain the batch and continuous process with respect to its advantages and disadvantages.	07
Q.4 (a) Write a note on: Green Solvents	03
(b) Discuss about 2-Naphthol and its derivative.	04
(c) Explain the manufacturing process of BON acid with suitable reaction scheme.	07
OR	
Q.4 (a) Give the synthesis of Naphthol sulphonic acid.	03
(b) How do you prepare aniline? Discuss it with reaction scheme.	04
(c) Explain the manufacturing process of Phenol with suitable reaction scheme.	07
Q.5 (a) Write down the fundamental consideration during the azo dyes preparation.	03
(b) Discuss about fluorescent whiteners.	04
(c) Explain the disperse dyeing technology over polyester fibres in details.	07
OR	
Q.5 (a) Write down the importance of metal complex dyes.	03
(b) Give the synthesis of anthraquinone.	04
(c) Explain the technology involved in synthesis of azo dyes in detail.	07
