

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-VI (NEW) - EXAMINATION – SUMMER 2018****Subject Code:2163608****Date:08/05/2018****Subject Name:Technology of Dyeing****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
<b>Q.1</b> (a) Explain the classification of textile fibres based on source.	<b>03</b>
(b) Explain pre-treatment method for application of reactive dye on cotton fabrics.	<b>04</b>
(c) Discuss in detail, the general properties of textile fibres?	<b>07</b>
<b>Q.2</b> (a) What is liquor to fiber ratio? Discuss the range for better utilization of dye?	<b>03</b>
(b) Discuss the difference between natural and synthetic fibers.	<b>04</b>
(c) Explain the reactivity & affinity of reactive dye towards textile fibre.	<b>07</b>
<b>OR</b>	
(c) Explain Maxi Type Jumbo Jigger Machine with its salient features.	<b>07</b>
<b>Q.3</b> (a) Write a short note on Steam heated cylinders	<b>03</b>
(b) Explain the Dye-Water interactions in a dyeing system?	<b>04</b>
(c) Discuss the different types of Dye-Fibre bonding in dyeing systems?	<b>07</b>
<b>OR</b>	
<b>Q.3</b> (a) Write a short note on hot flue driers.	<b>03</b>
(b) Discuss the horizontal cylinder dryers with its construction and working principle.	<b>04</b>
(c) Briefly explain batch wise dyeing of cellulose fibres with dichlorotriazine dyes.	<b>07</b>
<b>Q.4</b> (a) Write a short note on hot air dryers.	<b>03</b>
(b) Discuss the dye absorption in exhaust dyeing process.	<b>04</b>
(c) Explain Clauder Weldon dyeing machine with neat sketch.	<b>07</b>
<b>OR</b>	
<b>Q.4</b> (a) Write a short note on dry steamers.	<b>03</b>
(b) Differentiate Batch Dyeing & Continuous Dyeing methods.	<b>04</b>
(c) Explain Winch dyeing machine with neat sketch.	<b>07</b>
<b>Q.5</b> (a) Write a short note on Beaker Dyeing Machine.	<b>03</b>
(b) Discuss microwave assisted dyeing process.	<b>04</b>
(c) Which instrument is used for colour matching determination of dyed fibres? Explain with its principle?	<b>07</b>
<b>OR</b>	
<b>Q.5</b> (a) Discuss the importance of Tg in dye fiber interactions.	<b>03</b>
(b) Explain cold pad batch dyeing with schematic diagram.	<b>04</b>
(c) Explain 'U' Type Fabric Dyeing Machine operated with high temperature and high pressure?	<b>07</b>