Seat No.:	Enrolment No

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2017 Subject Code: 2182802 Date: 02/05/2017

Subject Name: Technological Advances in Textile Processing

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.
- Q.1 (a) Explain the importance of ultra sound technology in textile processing. Give a brief outline on various applications in textile processing.
 - (b) Give a brief review on recent developments in biotechnology. 07
- Q.2 (a) Describe various technological aspects of foam dyeing. State its advantages over conventional processes.
 - (b) Discuss various techno chemical aspects of oxido-reductase enzymes and their applications in textile processing.

OR

- (b) Explain the enzymatic degumming of silk and antifelting of wool. 07
- Q.3 (a) Describe technological aspects of super critical carbon dioxide in polyester dyeing.
 - (b) Explain fundamental concepts of nano technology. Discuss in detail the lotus leaf effect. Enlist various textile applications of nanotechnology.

OR

- Q.3 (a) Describe the process for production of nano fibers.
 - (b) Explain the use of biotechnology in preparatory processes of cellulosic 07 materials.
- Q.4 (a) Explain the mechanism of enzyme action. Discuss in detail the bio-polishing process of denim fabrics.
 - (b) Discuss the classification of enzymes with their different textile applications. 07
- Q.4 (a) Explain the concept of micro encapsulation. Describe the application of or encapsulation using cyclodextrin for fragrance in textiles.
 - (b) Explain the term "Plasma". Enlist the various techniques for generation of plasma and discuss the most used technique for its generation.
- Q.5 (a) Discuss the technological aspects of atmospheric pressure types of plasma 07 treatment.
 - (b) Justify the position of plasma technology in modification of cellulosics. 07

OR

- Q.5 (a) Write a critical review on digital dyeing and digital printing. State their merits over conventional ones.
 - (b) Discuss the applicability of electro chemistry in textile coloration. 07
