

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-VIII • EXAMINATION – SUMMER 2014

Subject Code: 182802**Date: 31-05-2014****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)** Answer the following objective questions. **07**
- i) Enzyme works by _____ and _____ mechanism.
 - ii) Papain is _____ type of enzyme.
 - iii) Lipases act upon _____.
 - iv) What are peroxide killer enzymes?
 - v) Which type of plasmas can improve hydrophilicity?
 - vi) Corona treatment is high pressure type of plasma, true or false? Correct if false.
 - vii) Give two examples of nano technology in nature.
- (b)** Give the sources of amylases, lipases, proteases with their applications. **07**
- Q.2 (a)** Discuss the application of amylases in processing of cotton. **07**
- (b)** Justify the position of protease enzymes in textile processing. **07**
- OR**
- (b)** Explain the suitability of cellulases in processing of denims. **07**
- Q.3 (a)** Discuss about biotechnology and plasma technology in context to their sustainability and eco friendliness. **07**
- (b)** Discuss the general applications of plasma technology. **07**
- OR**
- Q.3** Write notes on: **14**
- a) Modification of cellulose by plasma treatment
 - b) Atmospheric pressure plasma
- Q.4** Discuss the production techniques, properties and applications of : **14**
- a) Nano fibers
 - b) Nano emulsions
- OR**
- Q.4 (a)** Elaborately discuss various aspects of nano technology, general applications, its advantages and disadvantages. **07**
- (b)** Discuss the properties of supercritical carbon dioxide and its phase diagram. **07**
- Q.5 (a)** With neat sketch, explain the dyeing of polyester with supercritical carbon dioxide. **07**
- (b)** Give the method for micro encapsulation and discuss its textile application. **07**
- OR**
- Q.5** Throw light on scope of using ultra sound waves and electrochemistry in textile coloration, with the equipmentation used, their advantages and limitations. **14**