

**AVINASHILINGAM INSTITUTE FOR HOME SCIENCE AND HIGHER EDUCATION
FOR WOMEN, COIMBATORE 641043**

Master's Degree Examination – November 2017

Semester : ONE

**Class : I PG
Major : Bio Textiles**

**Time : 3 Hours
Max. Marks : 60**

**17MBXC02 Textile Biotechnology
Part – A**

Choose the Correct Answer 10 x ½ = 5

1. ----- is enzyme normally applied on cotton fibre substrates
a) amylase b) protease c) cellulase d) Lipase
2. ----- is pH suitable for processing textiles using enzymes
a) 6.5 b) 1 c) 14 d) 0
3. An enzyme inhibitor is a molecule that binds to an enzyme and the activity of enzyme will be -----
a) increased b) unaltered c) inactivated d) decreased
4. The unusual type of irreversible inhibition where the enzyme converts the inhibitor into a reactive form in its active site is -----
a) general inhibition b) suicide inhibition c) abnormal inhibition d) formal inhibition
5. The process of removing small molecules from a solution containing small and large molecules using semipermeable membrane is -----
a) dialysis b) filtration c) osmosis d) centrifugation
6. Enzyme which do not lose activity at relatively high temperatures is called -----
a) alkaline stable enzyme b) neutral enzyme c) thermo-stable enzymes d) acid stable enzyme
7. The process of eliminating micro-fibrils of cotton through the action of cellulase enzyme is called as -----
a) enzyme desizing b) biopolishing c) enzyme bleaching d) bio scouring
8. Enzymes are considered eco friendly, due to their nature of -----
a) cleansing action b) strong reaction c) attraction on textiles d) bio degradable
9. A laundry detergent that contains enzymes is called as -----
a) natural detergent b) soap c) biological detergent d) chemical detergent
10. Surfactants with good wetting properties will facilitate -----
a) increased enzymatic action b) no enzyme action c) drastic enzyme action d) decreased enzyme action

Part – B
Answer the following **5 x 4= 20**

Answer should not exceed 200 words or One pages

- 11a. Discuss in brief about the classification of enzymes.
(Or)
- 11b. Write about the relevant theories suitable for the enzyme substrates.
- 12a. Brief on the irreversible enzyme inhibition.
(Or)
- 12b. Give a brief note on the important aspects of iso enzymes.
- 13a. Give a brief description about the membrane bound enzymes.
(Or)
- 13b. Brief on the measurement of the enzymes using spectrophotometric method.
- 14a. Mention the important aspects involved in the scouring of cotton using enzymes.
(Or)
- 14b. Write about the wool deprickling process using the suitable enzymes.
- 15a. State the important role of enzymes as detergents.
(Or)
- 15b. Write about the important commercial application of pectinase enzymes.

Part – C
Answer the following **5 x7 = 35**
Answer should not exceed 600 words or Three pages

- 16a. Give a detailed account on the mechanism of the protease enzyme.
(Or)
- 16b. Elaborate about the important conditions attached with enzymes relevant with the pH and temperature of the solutions.
- 17a. Explain the important aspects associated with uncompetitive inhibition compared with competitive inhibition of enzymes.
(Or)
- 17b. Elaborate on regulation of enzyme activity by the covalent modification.
- 18a. Discuss the methodologies adopted for the extraction of soluble enzymes and membrane bound enzymes. (Or)
- 18b. With a neat description describe measurement of enzymes by the way of spectrofluorimetric assay.
- 19a. Elaborate on the involvement of enzymes for the desizing and biopolishing.
(Or)
- 19b. Describe the process of textile effluent treatments using the suitable enzymes.
- 20a. Give a detailed account on the emergence of enzymes in the area of detergents.
(Or)
- 20b. Explain method of application of the cellulase and amylase enzymes.
