

**Avinashilingam Institute For Home Science And Higher Education For Women,  
Coimbatore 641043**

**Masters Degree Examination – November 2018  
Semester - I**

**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. Select the one which is not an enzyme.  
a) Amylase      b) lipase      c) Cellulose      d) Protease
2. Which is the long chain compound responsible for enzyme formation?  
a) Pectin      b) Amino acids      c) Lignin      d) Cellulose
3. Choose the one which is not under the action of reversible enzyme inhibitors.  
a) Competitive inhibition      b) Uncompetitive inhibition  
c) Mixed inhibition      d) Repetitive inhibition
4. The enzymes which catalyse chemical reactions again and again are called \_\_\_\_\_.  
a) Regulatory enzymes.      b) Ideal enzymes  
c) Activated enzymes      d) Initiated enzymes
5. Identify the process which attaches a cell / enzyme to an insoluble inert support.  
a) Stabilized process      b) Inactive process  
c) Immobilization process      d) Sensitized process
6. Select the groups which usually carry charges to the proteins.  
a) Amine and acid      b) Hydroxyl and ketone  
c) Aldehyde and ketone      d) Ester and ether
7. Pick up the process where enzyme is used in textile finishing.  
a) Desizing      b) Biopolishing      c) Scouring      d) Retting
8. Indicate the enzyme which is used in cotton application.  
a) Lipase      b) Amylase      c) Protease      d) Cellulase
9. Select the enzyme which breaks down fats and grease.  
a) Amylase      b) Lipase      c) Protease      d) Cellulase
10. Identify the metabolic process that consumes sugar in the absence of oxygen.  
a) Reduction      b) Decomposition      c) Activation      d) Fermentation

**Part – B**  
**Answer the following      5 x 4= 20**  
**Answer should not exceed 200 words or One page**

- 11a. Write about the classification of enzymes.  
(or)
- 11b. Discuss about the factors affecting enzyme activity.
- 12a. Give a neat description about the iso-enzymes.  
(or)
- 12b. Write about the regulation of enzyme activity by covalent modification.
- 13a. Specify with proper description about the membrane bound enzymes.  
(or)
- 13b. Discuss on the colorimetric aspect for the measurement of enzymes.
- 14a. Justify the action of enzymes for the cotton scouring.  
(or)
- 14b. Discuss about the role of enzymes in the treatment of textile dye effluents.
- 15a. Give a brief description about the involvement of enzymes for detergents  
(or)
- 15b. Highlight in a suitable manner about the industrial applications of immobilized enzymes.

**Part – C**  
**Answer the following      5 x 7 = 35**  
**Answer should not exceed 600 words or three pages**

- 16a. Elaborate in a suitable manner about the mechanism of enzyme action.  
(or)
- 16b. Explain the lock and key model of enzyme reactions.
- 17a. Summarize about the important aspects of reversible and irreversible enzyme Inhibitions.  
(or)
- 17b. Enumerate on the important aspects of non competitive and uncompetitive enzyme inhibitions.
- 18a. Explain in a proper way about the extraction of soluble enzymes.  
(or)
- 18b. Elaborate on the enzyme activity measurement by spectrophotometric assay.
- 19a. Summarize on the application of enzymes towards flax retting and denim fading.  
(or)
- 19b. Enumerate on the involvement of enzymes in the degumming and shrink proofing processes.
- 20a. Explain with proper justification regarding the role of enzymes in detergents.  
(or)
- 20b. Elaborate with suitable justification and description regarding the formation of enzymes as fermentation products.