

**Avinashilingam Institute for Home Science and Higher Education for Women**  
**(Deemed to be University) Coimbatore-641 043**  
**Bachelor's Degree Examination – November 2018**  
**V Semester**

**Class : III B.Sc.**  
**Major : Food Science and Nutrition**

**Time :3 hours**  
**Max. Marks: 100**

**15BFNC14 Food Biotechnology**

**Part-A**

**10 x 1=10**

**Choose the correct answer**

1. The other name of the enzyme \_\_\_\_\_ is synthetase  
a. ligase      b. pancrease      c. phosphatase      d. transcriptase
2. Which of the following is obtained from lambda phage?  
a. cosmid      b. YAC      c. YEP      d. bacteriophage
3. Bt brinjal contains the crystalline protein  
a. CR1      b. CRYA      c. Cry1Ac      d. CryAC
4. Name the first GM crop to be commercialized  
a. corn      b. strawberry      c. brinjal      d. flavr savr tomatoes
5. Recovery and purification of biosynthetic materials from natural products  
a. downstream process      b. scaling up      c. fermentation      d. enzymology
6. In what units the time denoted in a bacterial growth curve?  
a. days      b. seconds      c. minutes      d. hours
7. Flavor and color of the fruits is due to  
a. primary metabolites      b. secondary metabolites      c. tertiary metabolites      d. soil
8. Which of these is used to produce spirulina biomass?  
a. fungi      b. yeast      c. spores      d. cyanobacteria
9. Xanthan gum derives its name from which species?  
a. Xanthomonas campestris      b. Xanthin      c. Zymose      d. Xanthas
10. Immobilized enzymes act as  
a. ligases      b. phosphatase      c. barriers      d. water soluble enzymes

**Part B**

**5 X 6=30**

**Answer the following**

**Answer should not exceed 400 words or two pages**

- 11.a. State any 4 differences between endo and exonucleases.  
(or)
- 11.b. Enumerate the functions of ligase.
- 12.a. Outline applications of Plant tissue culture.  
(or)
- 12.b. What is golden rice? Elaborate on it.
- 13.a. Explain the different stages of bacteria growth curve.  
(or)
- 13.b. What do you understand by a biochip ?
- 14.a. What is the difference between primary and secondary metabolites.  
(or)
- 14.b. Explain about xanthan gums .
- 15.a. Give an account on advantages of immobilized enzymes.  
(or)
- 15b. What are the disadvantages of immobilized enzymes.

**Part C**

**5 x 12=60**

**Answer the following**

**Answer should not exceed 800 words or four pages**

- 16.a. Describe a plasmid as a cloning vector with the help of a diagram.  
(or)
- 16b. Illustrate the lytic and lysogenic phase of bacteriophage.
- 17.a. Elaborate on the applications of genetic engineering.  
(or)
- 17.b. Explain Genetically modified foods with appropriate examples.
- 18.a. With the help of a diagrammatic representation describe continuous culture of fermentation.  
(or)
- 18.b. Explain downstream processing.
- 19.a. Describe the synthesis of citric acid and its applications.  
(or)
- 19 b. What is the process for the production of single cell protein from any micro-organism? Also mention the criteria by which you will select the micro-organism
- 20.a. Highlight the applications of immobilized enzymes.  
(or)
- 20.b. State the safety assessment of transgenic crops.