

**Avinashilingam Institute for Home Science and higher Education for Women  
(Deemed to be University) Coimbatore-641 043**

**Master's Degree Examination-November 2018  
III Semester**

**Class: II PG  
Major: Zoology**

**Time: 2 Hrs  
Max.Marks:60**

**17MZOC16-BIOTECHNOLOGY**

**Part-A**

**(10×1/2=5)**

**Choose the correct answer**

1. Enzyme isolated from bacteria *Thermus aquaticus* is.  
(a) Taq DNA polymerase (b) SI nuclease (c) DNA ligase (d) Methyl transferase
2. Who discovered insulin?  
(a) Zobel (b) Steward (c) F.Sanger (d) Anish dutta
3. Artificial plasmid containing cos- sites of  $\lambda$  DNA is  
(a) Plasmid (b) Cosmid (c) Phasmid (d) Phagemid
4. Transposons are otherwise called as.  
(a) Jumping genes (b) Encoding genes (c) Decoding genes (d) Recessive genes
5. Northern blotting technique was devised by.  
(a) Southern (b) Alwine (c) Towbin (d) Hogness
6. The technique used to detect a specific DNA sequence is called.  
(a) Northern blotting (b) Western blotting (c) Southern blotting (d) ELISA
7. An example for Tissue plasminogen Activator is.  
(a) Elastase (b) Thymidine (c) Esterase (d) Riboflavin
8. Which among the following is a natural medium?  
(a) Plasma clots (b) Serum (c) Heamolymph (d) All
9. Indian patent Act was passed in  
(a) 1965 (b) 1970 (c) 1975 (d) 1980
10. Superbug was created by.  
(a) A.M.Chakrabarty (b) A.Dunkel (c) W.Grace (d) Vandana

**Part-B**

**(5×4=20)**

**Answer the following**

**Answer should not exceed 200 words or one page**

11. a. Examine scope of biotechnology.  
(Or)  
b. Write an account on polynucleotide kinase.
12. a. Describe the life cycle of M13 phage.  
(Or)  
b. Briefly explain transposons.
13. a. Explain DNA probes and their uses.  
(Or)  
b. Describe the RAPD techniques with relevant sketches.
14. a. Discuss any two methods of physical sterilization techniques.  
(Or)  
b. Illustrate the primary cell culture techniques.
15. a. Write an account on intellectual property right.  
(Or)  
b. Identify recombinant vaccines with their uses.

**Part-C**

**(5×7=35)**

**Answer the following**

**Answer should not exceed 600 words or three pages**

16. a. Write an account on any 3 enzymes used in Genetic Engineering.  
(Or)  
b. Write an essay on restriction endonuclease and its types.
17. a. Describe plasmids and cosmids.  
(Or)  
b. Explain the methods employed to introduce rDNA into host cell.
18. a. Illustrate southern blotting technique in detail.  
(Or)  
b. Discuss the polymerase chain reaction and its uses.
19. a. Elucidate the physico-chemical properties of culture media.  
(Or)  
b. Scrutinize the cell lines and its types.
20. a. Give a detailed account on the production of monoclonal antibodies.  
(Or)  
b. Discuss the biosafety operation guidelines and regulations.