

**Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University) Coimbatore-641043**

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

**Class : II PG
Major : Biotechnology**

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

17MBTC20 Environmental Biotechnology(Self study)

Part A

10 x 1/2 = 5

Choose the correct answer

1. Which biogeochemical cycle has no atmospheric phase?
a. Phosphorus cycle b. Sulphur cycle c. Nitrogen cycle d. Oxygen cycle
2. -----is often used for the disposal for combustible waste
a. Incineration b. Land filling c. Burial d. Communal bins
3. The major dissolved pollutant in slaughterhouse wastewater is
a. Blood b. Liver c. Kidney d. Fat
4. The term single cell protein was introduced during the year
a. 1990 b. 1980 c. 1970 d. 1960
5. The bacteria employed for ethanol production in industries is
a. *S. cerevisiae* b. *C. brassicae* c. *K. fragilis* d. *Z. mobilis*
6. In India, which seeds are used to produce biodiesel ?
a. Jatropha b. Soybeans c. Rapeseed d. Castor Bean
7. Which organism is used for degradation of pentachlorophenol?
a. Phanerochaete b. Pseudomonas c. Alcaligenes, d. Azotobacter
8. Which isoenzymes have a crucial role in the degradation of many pesticides?
a. Glutathione S-transferase b. Metallothionein c. Phytochelatin d. ABC transporters
9. Bhopal disaster was caused by
a. Methyl Isocyanate b. Mercury c. Methane d. Carbamate
10. Anthrax is caused by a bacterium called
a. *Bacillus anthracis* b. *S. pyogenes* c. *Klebsiella* d. *Clostridium*

Answer ALL questions**Each answer should not exceed 200 words or one page**

11. a. Explain briefly on the ozone layer depletion
(Or)
11. b. Explain the importance of biodiversity
12. a. What are the effects of harmful algal blooms?
(Or)
12. b. Discuss the importance of single cell protein
13. a. Describe major application of Bioenergy
(Or)
13. b. Differentiate between renewable and non renewable sources of energy with example
14. a. Differentiate between bioremediation and biodegradation
(Or)
14. b. Explain the process of removal of heavy metals from waste water
15. a. What are Hazardous wastes? List them.
(Or)
15. b. What are the causes of land slide? Explain.

Part C

5 × 7 = 35

Answer ALL questions**Each answer should not exceed 600 words or three pages**

16. a. Give the general outline of nitrogen cycle with suitable diagram
(Or)
16. b. Explain the 4R's concept in solid waste management
17. a. Give a brief account on biomass energy in India
(Or)
17. b. Describe origin, matter and effects of air pollution
18. a. Describe the production of bioethanol
(Or)
18. b. Explain the treatment of distillery wastes with flow sheet diagram
19. a. Write a detailed account on biodegradation of xenobiotics?
(Or)
19. b. Give a comparative account on in situ bioremediation and ex situ bioremediation
20. a. Write a detailed note on Natural hazard briefly
(Or)
20. b. How the mitigation and perception of earthquake is done in India? Explain