



AT-1919

Seat No. _____

B. Sc. (Sem. VI) Examination

March / April - 2018

Biotechnology : Paper - 13

(Environmental Biotechnology)

Time : 3 Hours]

[Total Marks : 70

1 Do as Directed : 15

(1) Which of the following is considered as Bioplastic?

- (A) PHA (B) PCB
(C) PDA (D) All of above

(2) Which of the following is solid waste treatment?

- (A) Chlorination (B) UV Treatment
(C) Trickling Filter (D) Composting

(3) Removal of pollutant from environment and setting it to normal state is

- (A) Biomagnification
(B) Bioremediation
(C) Biodegradation
(D) Bioleaching

(4) Chemicals which are foreign for biosphere are...

- (A) Xenobiotics
(B) Recalcitrant
(C) Both (A) and (B)
(D) None of the above

- (5) Which of the following is considered as Biofertiliser?
- (A) Mycorrhizae (B) Azolla
(C) Rhizobium (D) All of the above
- (6) Which of the following is important indicator organism?
- (A) Faecal Coliform (B) E. coli
(C) Both (A) and (B) (D) None of the above
- (7) Which bacterium is used for removal of nitroaromatic compounds?
- (A) Pseudomonas sp. (B) B. subtilis
(C) E. coli (D) Streptococcus
- (8) Which of the following organisms is used for bioleaching of iron?
- (A) Thiobacillus ferrooxidans
(B) Pseudomonas sp.
(C) T. thiooxidans
(D) All of the above
- (9) DDT, which is biomagnified in environment, is...
- (A) PCB (B) Cycloalkane
(C) Pesticide (D) Petroleum
- (10) Chlorination is used to treat water for removal of...
- (A) Infectious Microorganisms
(B) Cations
(C) Only E. coli
(D) All of the above

- (11) Define: Biodegradation
- (12) Define: Biofertiliser
- (13) Define: Recalcitrant Compounds
- (14) Enlist steps of secondary treatment of waste water
- (15) Expand: MEOR

2 Write short notes on followings : (Any Five) 25

- (1) Transport and Fate of Pollution in Environment
- (2) Biodegradation of PCB compounds
- (3) Composting and Landfills
- (4) Properties of Waste Water
- (5) Bioextraction of copper
- (6) Fundamentals of Bioremediation
- (7) Biodegradation of alkenes

3 Write detailed notes : (Any Three) 30

- (1) Explain Bioaccumulation and Biomagnification of Pesticides. Add a note on its disastrous effects and explain Biotransformation of DDT.
- (2) Explain waste water treatment in detail.
- (3) Write a detailed account on varieties of Biofertilisers.
- (4) Write detailed account on properties, production and applications of Bioplastic.
- (5) Explain about bioremediation of nitroaromatic compounds.