

B.Sc. DEGREE (C.B.C.S.S.) EXAMINATION, MARCH 2015**Sixth Semester****Core Course 21—ENVIRONMENTAL BIOTECHNOLOGY**

(For B.Sc. Biotechnology)

Time : Three Hours

Maximum Weight : 25

Part A*Answer all questions.**A bunch of 4 questions, Weight 1 for each bunch.*

Choose the correct answer :

- I. 1. Secondary treatment of wastewater done in controlled environment :
- (a) Filter. (b) Bioreactors.
(c) Biomagnification. (d) Biosensor.
2. Green house gas :
- (a) Hydrogen. (b) Oxygen.
(c) Carbon dioxide. (d) Methane.
3. Immobilization of cells offers :
- (a) Recovery and use. (b) Cells can be wasted out.
(c) Discontinuous process operation. (d) Blocking of enzymes.
4. Anaerobic process is :
- (a) Fast. (b) Short retention time.
(c) Produce H_2S . (d) Need O_2 .
- II. 5. Encapsulation can be done using :
- (a) Sodium chloride. (b) PVC.
(c) Alginate. (d) None of these.
6. Chlorinated hydrocarbon :
- (a) DDT. (b) Parathion.
(c) Baygon. (d) Atrazine.
7. Amoebiasis is caused by :
- (a) Air pollution. (b) Water pollution.
(c) Heavy metal pollution. (d) Sound pollution.

Turn over

8. Liquid discharge from sewage treatment and industrial plants :

- (a) Effluent. (b) Floc.
(c) Humus. (d) Sludge.

III. 9. Introduction of microbes into contaminated environment for detoxification is _____.

10. TOC is _____.

11. Process of rapid algal growth in presence of high nitrate content is called _____.

12. Itai-Itai disease in Japan is caused by _____.

IV. 13. Acidity is _____.

14. Biological transformation of organic compounds by microbes is _____.

15. A hydrocarbon degrading bacteria is _____.

16. _____ is an example of aromatic hydrocarbon.

(4 × 1 = 4)

Part B

*Answer any five out of eight.
Weight for each question 1.*

17. Explain food adulteration.
18. What is land filling ?
19. What is COD ?
20. Write about floc ?
21. What is coagulation ?
22. What is methanogenesis ?
23. Write about trickling filter process.
24. Explain presumptive test.

(5 × 1 = 5)

Part C

*Write short notes on any four out of six.
Weight for each question 2.*

25. Explain primary, secondary and tertiary treatment of waste water.
26. Write about molecular biology of biodegradation.
27. Explain bacteriological analysis of drinking water.
28. Write about Aerobic pond.

29. Explain green house effect and its significance.
30. Give an account on activated sludge process.

(4 × 2 = 8)

Part D

*Answer any two out of three.
Weight for each question 4.*

31. Explain biological treatment of waste water.
32. Explain types of reactions in biodegradation.
33. Give an account on Air pollution.

(2 × 4 = 8)