

S.No. 1774

12UBTE02

(For the candidates admitted from 2012–2013 onwards)

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Sixth Semester

Biotechnology

Elective — ENVIRONMENTAL BIOTECHNOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL the questions.

1. Give two important values of marine environment.
2. List any two medicinal uses of seaweed.
3. What do you mean by macro fouler?
4. Write the significance of any one antifouling methods.
5. Name some heavy metal pollution.
6. Differentiate Ex situ bioremediation and In situ bioremediation.
7. Write the scope of using biofuel as renewable energy sources.



8. Impact of biofilm on environment.
9. What are characteristics of sewage sludge?
10. Define indicator organisms.

SECTION B — (5 × 5 = 25 marks)

Answer ALL the questions.

11. (a) Write a note on anti-viral promoting marine products.

Or

- (b) Marine toxins- Discuss.

12. (a) Elucidate the significance of raceway culture in aquaculture.

Or

- (b) Write an account on the effect of biofouling in marine environment.

13. (a) Give your views on naturally occurring plants for phytoremediation.

Or

- (b) Briefly describe the genetic engineering approaches in bioremediation.

14. (a) What are Biofuels? How these are produced? Explain with examples.

Or

- (b) Illustrate the biotechnological applications in environmental management.

15. (a) Enumerate the process of activated sludge system employed in waste treatment.

Or

- (b) Elaborate on various Environmental protection Act 1986.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Give an account of bioactive marine natural products.
17. Illustrate on the design and construction of a pond for aquaculture.
18. Describe about pesticide degradation pattern and explain how the petroleum products are degraded.
19. Explain how biosensors are used for environmental monitoring and bio-monitoring.
20. Elaborate the microbial strains used in bioleaching of metal extraction and their mode of action.