

Roll No :

Total No. of Questions : 11]

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SP-717

M.Sc. (Final) Examination, 2021

BIOTECHNOLOGY

Paper - VI

(Environmental Biotechnology)

Time : 1½ Hours]

[Maximum Marks : 75

Section-A

(Marks : 2 × 10 = 20)

Note :- Answer all *ten* questions (Answer limit 50 words). Each question carries 2 marks.

(खण्ड-अ)

(अंक : 2 × 10 = 20)

नोट :- सभी दस प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 50 शब्द)। प्रत्येक प्रश्न 2 अंक का है।

Section-B

(Marks : 5 × 5 = 25)

Note :- Answer all *five* questions. Each question has internal choice (Answer limit 200 words). Each question carries 5 marks.

(खण्ड-ब)

(अंक : 5 × 5 = 25)

नोट :- सभी पाँच प्रश्नों के उत्तर दीजिए। प्रत्येक प्रश्न में विकल्प का चयन कीजिए (उत्तर-सीमा 200 शब्द)। प्रत्येक प्रश्न 5 अंक का है।

Section-C

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five (Answer limit 500 words). Each question carries 10 marks.

(खण्ड-स)

(अंक : 10 × 3 = 30)

नोट :- पाँच में से किन्हीं तीन प्रश्नों के उत्तर दीजिए (उत्तर-सीमा 500 शब्द)। प्रत्येक प्रश्न 10 अंक का है।

BI-351

(1)

SP-717 P.T.O.

Section–A

1. (i) What are Greenhouse Gases ?
- (ii) What is the impact of UVB radiation on environment ?
- (iii) Give importance of anaerobic digestion.
- (iv) What are oxidation ditches ?
- (v) Define Biosorption.
- (vi) What are Hazardous Wastes ?
- (vii) What are Xenobiotics ?
- (viii) Give *two* advantages of Phytoremediation.
- (ix) Define Genosensor.
- (x) What is Bioremediation ?

Section–B

2. How do Greenhouse gases contribute to global warming ? Explain.

Or

Write a short note on water management.

3. Write the steps of anaerobic treatment for waste water.

Or

Describe the microbiology of activated sludge.

4. Describe bioaccumulation of heavy metals with examples.

Or

Write a short note on silage.

5. Describe microbiological degradation of pesticides.

Or

Discuss application of microbes as biofertilizers for productivity improvement.

6. Explain biodegradation of polychlorinated biophenyls.

Or

Discuss gene probes for environmental remediation.

Section–C

7. What is environmental pollution ? Describe the biotechnological approaches for environmental management.
8. Write a detailed account on water supply treatment.
9. Explain biogas production in detail.
10. What are biosensors ? Explain any one biosensor for detection of environment pollutants in detail.
11. Describe the bioremediation of contaminated soil and waste land.