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SEAT No. :

P1755

[5230]-307

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M.Sc.

ENVIRONMENTAL SCIENCE

**EVSC-309 : Environmental Biotechnology
(2013 Pattern) (Semester-III)**

Time : 3 Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) *Answer any Five questions.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *All questions carry equal marks.*

Q1) a) What is environmental biotechnology? Give the scope and application areas.

b) Explain the concept of bioremediation and its role in pollution control.

Q2) a) What is integrated pest management? Explain significance.

b) How do biocomposting and biomethanation help in management of agricultural wastes?

Q3) a) Enlist the five categories of microorganisms and give their characteristics.

b) Write about the nutritional classification of microbes.

Q4) a) What are the different factors affecting microbial growth? Write in detail about any one.

b) Explain the different biotechnology strategies used in forestry and waste land management.

Q5) a) What are bioindicators? Explain their role in detection of pollution.

b) Write a note on GMO's and biosafety.

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Q6) a) What is a biosensor? Write about the different types. Explain any one in detail.

b) Explain the role of biotechnology in biodiversity conservation.

Q7) a) Write a note on alternate fuels.

b) Explain the mechanism of phytoremediation with examples.

Q8) Write short notes on any two:

a) Biopesticide

b) Biomining

c) Indicator organisms

