

4. a) Define Bioremediation? Write types and applications of Bioremediation

OR

b) Discuss about the role of microbes in removal of oil spills

5. a) Describe the industrial production of citric acid

OR

b) Discuss the methodology of industrial production of penicillin

6. a) Write about the waste water treatment and its management

OR

b) What are the renewable sources of energy? Write their types and applications

[29/II Y/211]

[Aug-11]

[SPDBT-205]

M.Sc. DEGREE EXAMINATION

Biotechnology

II YEAR

INDUSTRIAL AND ENVIRONMENTAL BIOTECHNOLOGY

(Effective from the admitted batch 2009-10)

Time: 3 Hours

Max.Marks: 70

Instructions: All parts of the unit must be answered in one place only.
Figures in the right hand margin indicate marks allotted.

SECTION-A

1. Answer any **Four** of the following: (4x5=20)

- a) Fed batch of fermentation
- b) Single cell protein
- c) Green house effect
- d) Bioremediation
- e) Solid substrate fermentation
- f) Fossil fuels
- g) Anti foaming agents

SECTION-B

Answer all questions: (5x10=50)

2. a) Describe the methodologies of isolation, screening and maintenance of industrially useful micro-organisms

OR

b) Discuss about the strain improvement by genetic recombination

3. a) What is bioreactor? Describe its parts and their functions

OR

b) Describe the methodology involved in the production of enzymes