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B.Sc. 2nd Semester (New Scheme) (Re-appear)

Examination, March-2016

BIOTECHNOLOGY

Paper-BT-202

Microbiology

Time allowed : 3 hours]

[Maximum marks : 40

Note : Question No. 1 is compulsory. Attempt total five questions at least one from each unit. All questions carry equal marks.

1. Write a short note on :

- (a) Sporulation. 1 each = 10
- (b) Catabolic pathways.
- (c) Chemical methods of controlling microorganisms.
- (d) Petroleum microbiology.
- (e) Coliforms.
- (f) Microbial phylogenies.
- (g) Eukaryotic cells.
- (h) Bacterial pollutants of water.
- (i) Bacterial growth measurements.
- (j) Fermented foods.

Unit-I

- 2 (a) Explain evolution of microbiology. 4
- (b) Explain current classification of bacteria. 3

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3. (a) Explain distribution and characterization of prokaryotic and eukaryotic cells. 4
(b) Explain structure composition of viruses along with their unique features. 3

Unit-II

4. What do you mean by microbial cultivation and explain the various methods of this? 7
5. Explain in detail nutritional categories of microorganisms. 7

Unit-III

6. Explain in detail microbial growth. 8
7. Explain the process of bacterial reproduction through transduction. 8

Unit-IV

8. Write note on : 2 each = 8
(a) Coliforms and non-coliforms
(b) Chemotherapeutic Agents of controlling microorganisms.
(c) Fermented foods.
(d) Deterioration of materials due to microorganisms.
9. (a) Explain the physical and chemical methods of controlling microorganisms. 4
(b) What do you mean by bio-engineering of microorganisms in industrial microbiology? 4

91548