2014-15

VCD-23/03/15 BIOTECHNOLOGY-I S.Y.B.Sc. SEM III EXAM MARKS 75 2½ HRS (80)

- All questions are compulsory.
- Figures to the right indicate marks
- Draw diagram wherever necessary

Q.I (A) Explain the following terms (any three) (06)

1. Generation time.
2. Diauxic growth
3. Synchronous culture
4. Continuous culture.
5. Monoclonal antibodies.
6. Live attenuated vaccine.

Q.I (B) Give principle of: (any one) (02)

1. Coulter counter
2. Hybridoma technology

Q.I (C) Answer the following (any two) (12)

1. Give a brief account on DNA probes as diagnostic tools.
2. What is microbial growth? Mathematically derive expression of microbial growth.
3. Describe the indirect methods of measuring growth.
4. Briefly describe synchronous growth.

Q.II (A) Explain the following terms (any four) (08)

1. Limnology
2. Dust
3. Coliforms
4. Disinfection
5. Marshes
6. Glycol compounds
7. Potable water
8. Air sanitation filters

Contd/...2

Q.II (B) Explain in brief: (any two) (12)

1. Physical methods for air sanitation.
2. Methods for detecting faecal pollution of drinking water.
3. Any three methods for enumeration of bacteria in air.
4. The working of Slow sand filters with a suitable diagram.

Q.III (A) Explain the following terms (any three) (06)

1. Growth factors
2. Baffles
3. Continuous Sterilization
4. Corn steep liquor
5. Inoculum media
6. Impellers

Q.III (B) Give significance of :(any one) (02)

1. Spargers
2. Buffers

Q.III (C) Answer the following (any two) (12)

1. Describe water as a major component of fermentation medium. Add a note on minerals.
2. Describe Carbon sources as a component of fermentation medium.
3. Give a brief account on Sterilization of feed and liquid wastes.
4. Give characteristics of an ideal anti foaming agent.

Q.IV Write a note on (any three) of the following (15)

1. Precursors and chelators
2. Molasses.
3. Vaccines.
4. Continuous cultures and continuous culture systems.
5. Bio safety in laboratory
6. Factors affecting number and kinds of microorganisms present in water.