First Year B. Sc. Examination
April/May - 2003

Biotechnology (Vocational) : Paper - II

Time : 3 Hours] [Total Marks : 70

Instructions : (1) Question numbers as it is in question paper should be correctly written in margin. (2) Marks are designated on the right hand side.

1 (a) Draw and discuss the structure and functions of : 7
 (a) Golgibody
 (b) Chloroplast.
 (b) Discuss the events occurring during mitosis. 7

OR
1 (a) Discuss the functions of proteins. 7
 (b) Write a note on Desmosomes. 7

2 (a) What is apoptosis. Discuss it in detail. 7
 (b) Explain in brief about cell differentiation. 7

OR
2 (a) Write a note on gap–junctions. 7
 (b) Discuss the structure and functions of peptidoglycan. 7

3 (a) Write about different methods used for sludge disposal. 7
 (b) Discuss the effect of pesticides on soil micro-organisms. 7

OR
3 (a) What is pasturisation ? Discuss in detail. 7
 (b) Discuss the significance and the mode of action of nitrogen fixing bacteria. 7
4 Write notes on any **two**:  
1. Recycling of urban-waste for agriculture purpose  
2. Reclamation of wasteland that is moderately difficult to reclaim  
3. Cellulose as a fuel  
4. Petrocrops as an industry of future.

5 Write short notes: (any **three**)  
1. MPN and MBRT  
2. B. Thurangogenesis  
3. Biofertilizers  
4. Calmodulin  
5. "9+2" Arrangement.