M.Sc.(Microbiology) (CBCS Pattern) First Semester

PSMBT-101-Paper-I : Microbial Diversity & Evolution

P. Pages : 1 **GUG/W/18/11171**

Time : Three Hours * 3 2 7 4 * Max. Marks : 80

Notes : 1. All questions are compulsory and carry equal marks.

1. Describe in detail evolution of earth and early life forms. **16**

OR

a) Explain in detail bacterial speciation. **8**

b) Give the characteristics of domain of life. **8**

2. a) Describe general metabolism in archea with evolutionary significance. **8**

b) What are heat stable biomolecules? Explain their types. **8**

OR

a) Write notes on thermoproteus and sulfolobales. **8**

b) Give account on methanogens and Thermoplasma. **8**

3. Explain cyanobacteria with respect to prochlorophytes. **16**

OR

Write notes on

a) Iron oxidising bacteria. **8**

b) Sulphur reducing bacrteria. **8**

4. Describe in detail Branching Hyperthermophiles and Thermotoga. **16**

OR

Explain

a) Green Sulphur bacteria. **8**

b) Green non Sulphur bacteria. **8**

5. Write short notes on

a) Signature sequences. **4**

b) Energy metabolism in crenarchaeota. **4**

c) General characteristics of phylum verrucomicrobia. **4**

d) Deferribacter. **4**

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