



**JB-3180**  
**Second Year B. Sc. (Sem. IV) Examination**  
**April/May – 2013**  
**MB-08 : Taxonomy of Prokaryotes**

Time : Hours]

[Total Marks : 50

**Instructions :**

(1)

<p>नीचे दशांशके निशानीवाणी विगतो उत्तरवडी पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : ☛ <b>Second Year B. Sc. (Sem. IV)</b></p> <p>Name of the Subject : ☛ <b>MB-08 : Taxonomy of Prokaryotes</b></p> <p>☛ Subject Code No. : <b>3 1 8 0</b> ☛ Section No. (1, 2,.....): <b>Nil</b></p>	<p>Seat No. : □ □ □ □ □ □</p> <div style="border: 1px solid black; border-radius: 15px; padding: 10px; text-align: center; margin-top: 10px;">Student's Signature</div>
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- (2) Figures to the right indicate full marks of the question.  
(3) Draw neat and labelled diagrams wherever necessary.

1 Give specific answers : 10

- (1) Define :
  - (i) Taxonomy
  - (ii) Species.
- (2) Name five major groups, the phylum Euryarchaeota contains.
- (3) Differentiate between oxygenic photosynthesis and anoxygenic photosynthesis.
- (4) Define :
  - (i) Hyphae
  - (ii) Actinomycetes.
- (5) List the members included under the low G+C positives.

2 Explain any two of the following : 12

- (1) Explain the endosymbiotic hypothesis of the origin of mitochondria and chloroplast.
- (2) Define - Hyperthermophiles and describe the major characteristics of phylum Crenarchaeota.
- (3) Characterize purple sulfur bacteria and purple non-sulfur bacteria. Explain how they obtain energy by oxidizing sulfur compounds ?

- 3** Answer any **two** of the following : **16**
- (1) What are the general characteristics of methanogenic archaea? State their ecological and practical importance.
  - (2) Describe the important characteristics of phylum Spirochetes and their role as human pathogens.
  - (3) Describe the major properties of the genus Bacillus. Define parasporal body. List the practical impact it has on a society.
- 4** Write short notes on any **three** of the following : **12**
- (1) Higher level classification of the eucarya
  - (2) Compare and contrast : Bacteria and Archaea
  - (3) General characteristics of order Enterobacteriales
  - (4) Actinomycete cell wall types.
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