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DMM-3083

B. Sc. (Microbiology) (Sem. IV) Examination

March / April - 2016

MB-08 : Taxonomy of Prokaryotes

Time : **2** Hours] [Total Marks : **50**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ B. SC. (MICROBIOLOGY) (SEM. IV)

Name of the Subject :

☛ MB-08 : TAXONOMY OF PROKARYOTES

☛ Subject Code No. : 3 0 8 3 ☛ Section No. (1, 2,.....) : Nil

Seat No. :

Student's Signature

(2) Figures to the right indicate full marks of the question.

(3) Draw neat and labeled diagrams whenever necessary.

1 Give specific answers : **12**

(a) What are hydrogenosome? State its significance in endosymbionts.

(b) Define Pseudomurein. Give two differences in cell wall composition of archaea and bacteria.

(c) List two examples of class Alphaproteobacteria and state any one distinctive characteristic.

(d) Which are the two groups of Enterobacteriacaece family with respect to its fermentation products? Give one example of genus belongs to these groups.

(e) Give general features of the 2nd edition of Bergey's Manual of Systematic Bacteriology.

(f) State the phylum of low G+C gram positive bacteria belongs. Name the classes in which they divided.

2 Explain/comment on any two of the following : **12**

(a) Molecular techniques has made rapid change in bacterial taxonomy.

(b) Archaeal metabolism exhibit great variations.

(c) Cyanobacteria differ fundamentally from green and purple photosynthetic bacteria.

3 Discuss any two of the following : **16**

(a) Discuss Whittaker's classification system of organisms along with suggested alternative to this system.

(b) Explain Archaea on basis of their molecular biology and metabolism.

(c) State general characters of class Clostridia and Bacilli.

4 Write short notes on any two of the following : **10**

(a) Numerical Taxonomy.

(b) Spirochaetes

(c) Actinomycetes - Cell wall composition and Significance.
