



DF-1452
M. Sc. Bioscience (Microbiology) (Sem. III)
Examination
March/April – 2016
Bios-(M)-301-Advanced Taxonomy & Cytology of
Microbes

Time : 3 Hours]

[Total Marks : 70

Instructions :

(1)

<p>नीचे दृशायेव निशानीवाणी विगतो उत्तरवही पर अवश्य लपवी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : M. SC. BIOSCIENCE (MICROBIOLOGY) (SEM. III)</p> <p>Name of the Subject : BIOS-(M)-301-ADVANCED TAXONOMY & CYTOLOGY OF MICROBES</p> <p>Subject Code No. : 1 4 5 2 Section No. (1, 2,.....): Nil</p>	<p>Seat No. : <input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/><input type="text"/></p> <div style="border: 1px solid black; border-radius: 15px; height: 80px; display: flex; align-items: center; justify-content: center; margin-top: 10px;">Student's Signature</div>
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(2) Figures to the right indicate full marks of the questions.

.1 Answer any two of the following 18

- a. Give important features of symbiotic N_2 fixing bacteria and discuss how do they fix nitrogen.
- b. Describe the scheme of nomenclature & classification of Bacteria.
- c. Explain the taxonomic backbone of prokaryotic system.

.2 Answer any two of the following 18

- a. Discuss : Phylogenetic Vs. phenetic classification.
- b. How does the oligonucleotide signature (sequences) and genomic fingerprinting is useful to determine the phylogenetic relationship.
- c. Briefly discuss how taxonomic rank and phylogenetic tree are used for classifying the organisms?

3. Answer any two of the following 18

- a. Describe the salient features of structure of fungi.
- b. How do viroids differ from prions? Explain their important features and the diseases caused by them.

c. Explain the structure of virus capsids and envelope.

4 Answer any two of the following

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- a) Describe growth of bacteria by explaining the stages of bacterial growth curve.
 - b) Explain the fungal reproduction with suitable example.
 - c) Discuss the life cycle of *Saccharomyces cerevisiae* in detail.
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