

M.Sc. Semester - 4 (CBCS) Examination

Oct/Nov -2020 [OLD COURSE]

MOLECULAR PHYLOGENY AND DIVERSITY (CORE)

Time: 2:00 Hours

Marks: 56

Instructions:

1. Figures to the right indicate marks.
 2. There are five questions in the question paper.
 3. Answer any four of the following questions.
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- Q. 1 Answer the following** (any seven out of ten, each of **two** marks) 14
1. Mention the two examples of Epsilon proteobacteria.
 2. What is the contribution of Kary Mullis.
 3. Explain universal Phylogenetic tree.
 4. Mention the distinguish feature of clostridia.
 5. Define characteristics of Actinobacteria.
 6. What is ARDRA?
 7. What is importance of 16s rRNA gene?
 8. Write an application of DGGE.
 9. What are molecular applications phylogenetic trees?
 10. What is distinguish characteristics of low G+C bacteria.
- Q. 2 Answer the following** (any two out of three, each of **seven** marks) 14
1. Explain nucleic acid and its role in microbial diversity analysis.
 2. Classified the microbes based on molecular approach.
 3. Write a note on phylogenetic trees.
- Q.3 (A) Answer the following** 14
1. Explain the molecular method of non-culturable microbes. [5]
 2. Discuss TGGE. [5]
 3. What are Cultivable microbes? Explain. [4]
- OR**
- Q.3 (B) Answer the following** (each of **seven** marks) 14
1. Explain nucleic acid hybridization and discuss its importance.
 2. Write a note on PCR.
- Q.4 (A) Answer the following** (any two out of three, each of **five** marks) 10
1. Discuss the Lactobacilli and explain its biotechnological application.
 2. What are survival mechanisms of Clostridia? Discuss its habitat.
 3. Explain the gram-positive high G + C bacteria in detail.
- Q.4 (B) Answer the following** (any one out of two) 04
1. Write a note on low G + C bacteria.
 2. Discuss classification of Bacilli and mention its characteristics.
- Q.5 Answer the following** (any two out of four, each of **seven** marks) 14
1. Write note on beta proteobacteria bacteria.
 2. Describe non-proteobacteria.
 3. Discuss distinguish feature of gram-negative bacteria.
 4. Write the basic difference of delta and epsilon proteobacteria.
