

Seat No. : \_\_\_\_\_

**AJ-121**

**April-2016**

**B.Sc., Sem.-IV**

**CC-204 : Microbiology  
Microbial Biodiversity**

**Time : 3 Hours]**

**[Max. Marks : 70**

**Instructions :** (1) All questions carry equal marks.  
(2) Figures on right side indicate marks.

1. Answer any **two** : **14**
  - (a) Explain evolution of a progenitor cell.
  - (b) Explain theory of origin of eukaryotic cell.
  - (c) Draw evolutionary tree of microorganisms and explain it in brief.
  - (d) Explain in brief Values of biodiversity.
  
2. Answer any **two** : **14**
  - (a) List cultural methods used for the study of biodiversity and explain any three.
  - (b) Explain with importance : determination of GC content in the study of biodiversity.
  - (c) Explain any three microscopic methods for the study of biodiversity.
  - (d) Explain importance of rRNA sequence comparison in the study of biodiversity.
  
3. Answer any **two** : **14**
  - (a) Write differences between archaebacteria and eubacteria.
  - (b) Explain in brief Diversity in ultrastructure of cell in archaea .
  - (c) Explain physiological diversity among Eubacteria.
  - (d) Explain ecological diversity in archaea.

4. Answer any **two** : **14**
- (a) Explain general characteristic of fungi.
  - (b) Explain physiological, metabolic and ecological characteristics of algae.
  - (c) Explain distinctive features of protozoa.
  - (d) Write a note on Virus.

5. Answer in **one** word/**one** line : **14**
- 1. What is “biodiversity” ?
  - 2. What is the full form of ‘LUCA’ ?
  - 3. What are non-culturable microbes?
  - 4. Mention elemental composition of a cell.
  - 5. Mention the fraction of ribosome used for the study of prokaryotes.
  - 6. Name groups of archaeobacteria.
  - 7. Name at least one habitation for thermophilic bacteria.
  - 8. What are halophiles ?
  - 9. Give one example of acidophilic bacteria.
  - 10. Give one example of psychrophilic bacteria.
  - 11. Mention the name of disease caused by Prions.
  - 12. What are virioids ?
  - 13. What are lichens ?
  - 14. Give an example of eukaryotic microorganism.
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