

GUJARAT UNIVERSITY

April - 2016

B.Sc. (SEMESTER - 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 :

- (a) Explain evolution of a progenitor cell.
- (b) Explain theory of origin of eukaryotic cell.
- (c) Draw evolutionary tree of micro-organisms and explain it in brief.
- (d) Explain in brief Values of biodiversity.

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2. Answer any two :

- (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.

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3. Answer any two :

- (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.

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4. Answer any two :

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- (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 :

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- (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 micro-organism.

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