

(6 pages)

Reg. No. :

Code No. : 20884 E Sub. Code : EFMI 11

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2024.

First Semester

Microbiology

Foundation Course – BASIC MICROBIOLOGY

(For those who joined in July 2023 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Which of the following is the comma shaped bacteria?

- (a) Sarcina (b) Bacilli
(c) Vibrio (d) Spirochetes

2. Which of the following does not occur during binary fission in bacteria?

- (a) Cell elongation (b) Cytokinesis
(c) DNA duplication (d) Spindle formation

3. Name the micro organism found in milk that converts milk to curd

- (a) Milk micro bacteria
(b) White bacteria
(c) Lactic acid bacteria
(d) Macro bacteria

4. _____ is used for the treatment of waste water?

- (a) Virus
(b) Heterotrophic microbes
(c) Protozoa
(d) Autotrophic microbes

5. Bergey's manual of systematic bacteriology has published in _____ volumes

- (a) Four (b) Five
(c) Two (d) Three

6. The category family is between _____

- (a) Genus and species
- (b) Order and genus
- (c) Phylum and genus
- (d) Kingdom and class

7. Mordant used in gram's staining is?

- (a) Crystal violet
- (b) Iodine
- (c) Safranin
- (d) Malachite green

8. What is the purpose of serial dilution?

- (a) To increase the concentration of the sample
- (b) To decrease the concentration of the sample
- (c) To measure the p^H of the sample
- (d) To measure the temperature of the sample

9. Yeast is used in the production of _____

- (a) Ethyl alcohol
- (b) Acetic acid
- (c) Cheese
- (d) Curd

10. Which bacteria fix nitrogen in the soil?

- (a) Nitrobacter
- (b) Nitrosomonas
- (c) Rhizobium
- (d) Clostridium

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PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Explain microbial cell division and its types.

Or

(b) Explain the characteristics of cell wall of prokaryotes and eukaryotes.

12. (a) Explain the role of microbes in pharmaceutical industries.

Or

(b) Write about the importance of microbes in agriculture.

13. (a) What are the major characteristics used in microbial taxonomy?

Or

(b) What is numerical classification? – Explain.

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14. (a) Explain the steps of Gram's staining.

Or

(b) Explain the steps of acid fast staining.

15. (a) Write about the role of microbes in food production and Give five examples.

Or

(b) Explain important microbes in water and it's application.

PART C — (5 × 8 = 40 marks)

Answer ALL questions choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Define prokaryotes and Explain their structure and characteristics.

Or

(b) Elaborate the structure and characteristics of eukaryotic cell.

17. (a) Write about the importance of fungi to human.

Or

(b) Explain the importance of protozoa to human.

18. (a) Elaborate Bergey's system of bacterial classification.

Or

(b) Explain Whitaker's five kingdom concept of classification.

19. (a) Explain in detail about pure culture techniques.

Or

(b) Write about the principle, construction and applications of compound microscope.

20. (a) Elaborate the importance of microbes in environment.

Or

(b) Write about the role and importance of microbes in soil.