

(6 pages)

Reg. No. :

Code No. : 7454

Sub. Code : ZZOM 34

M.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2023.

Third Semester

Zoology — Core

MICROBIOLOGY

(For those who joined in July 2021-2022 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Identify the father of microbiology
(a) Darwin (b) Leeuwenhoek
(c) Lamark (d) De Vries
2. Name the technique which is used to construct the phylogenetic tree
(a) Protein synthesis (b) 16s RNA sequencing
(c) Western blot (d) Northern blot

3. Give example for the most commonly used differential medium

(a) blood agar (b) blood sugar
(c) peptone (d) chocolate

4. Select the device which is used for continuous culture of bacteria

(a) Chemostat
(b) Petriplate
(c) Chemostat and turbidostat
(d) Fermenter

5. Choose the disease which is caused by *Candida albicans*

(a) Candidiasis (b) Amoebiasis
(c) Polio (d) Syphilis

6. Choose the causative agent of leprosy

(a) *Mycobacterium leprae*
(b) *Entamoeba*
(c) *Plasmodium vivax*
(d) *Vibrio* sp.

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7. Select the cheapest method of dehydration
(a) sun drying (b) heating
(c) radiation (d) pickling
8. Select the bacteria which spoils meat
(a) Pseudomonas (b) Oxygen
(c) Lithium (d) Strontium
9. Choose one of the bioleaching microbe
(a) Vibrio sp
(b) Clostridium
(c) Thiobacillus ferrooxidans
(d) Cornebacterium
10. Choose the process of capturing of metals by microbes from the waste water
(a) biodegradation (b) biosorption
(c) bioagumentation (d) bioremediation

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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) Enumerate the scope of microbiology.
Or
(b) Recall the special features of monera.
12. (a) Describe the structure of endospore.
Or
(b) Explain the structure and functions of pili.
13. (a) Discover the causative agents, symptoms of amoebic dysentery.
Or
(b) Examine the causative agent and symptoms of Rabies.
14. (a) Explain about phospho bacteria.
Or
(b) Analyze the spoilage of fruits and vegetables.

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15. (a) Assess the biodegradation of pesticides.

Or

- (b) Summarize the production of penicillin.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b)
Each answer should not exceed 600 words.

16. (a) Enumerate the Bergy's manual of systematic classification of bacteria.

Or

- (b) Enumerate the 16s rRNA sequencing techniques.

17. (a) Explain the principles and application of Lyophilizer.

Or

- (b) Classify the various culture techniques of bacteria.

18. (a) Determine the causatives and symptoms of sexually transmitted disease syphilis.

Or

- (b) Explain the causatives, symptoms and control measures of Leprosy.

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19. (a) Explain in detail about meat spoilage and its preservation.

Or

- (b) Analyze the role of biofertilizer in agriculture.

20. (a) Justify bioplastics is an eco-friendly biodegradable products.

Or

- (b) Distinguish the *In situ* bioremediation from *Ex situ* bioremediation.
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