

(6 pages)

Reg. No. :

Code No. : 30384 E Sub. Code : CMZO 52

B.Sc. (CBCS) DEGREE EXAMINATION,
APRIL 2025.

Fifth Semester

Zoology — Core

MICROBIOLOGY AND IMMUNOLOGY

(For those who joined in July 2021 and 2022 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Choose the enzyme which is secreted by Yeast.
(a) zymase (b) lactose
(c) cellulose (d) limulus
2. Select the strong fibers which is present in the bacterial cell wall.
(a) starch (b) fat
(c) peptidoglycans (d) glycerol

3. Show the culture medium which allows the growth of particular variety of Bacteria.
(a) Differential medium
(b) Blood medium
(c) Transport medium
(d) Chocolate medium
4. Select the culture of bacteria in a liquid medium.
(a) Agar plate culture
(b) Roll tube culture
(c) Broth culture
(d) Agar stab culture
5. Select the bacteria which are living inside the roots of leguminous plant.
(a) *Bacillus subtilis*
(b) *Pseudomonas*
(c) *Rhizobium*
(d) *Lactobacillus*
6. Match the *Vibrio cholera* with the following.
(a) Tuberculosis (b) Cholera
(c) Candidiasis (d) AIDS

7. Select the only immunoglobulin that crosses the human placenta.

- (a) Ig.A (b) Ig M
(c) Ig G (d) Ig D

8. Choose the antigen binding site.

- (a) epitope (b) isotope
(c) paratope (d) none

9. Match the immediate type of hypersensitivity with the following.

- (a) anaphylaxis
(b) infiltration
(c) erythema
(d) pathogenesis

10. Select the Immunity which occur from birth.

- (a) innate immunity
(b) active immunity
(c) acquired immunity
(d) passive immunity

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Describe the structure of Yeast.

Or

(b) Explain the structure of bacteriophage with neat sketch.

12. (a) Differentiate the Selective medium and broth medium.

Or

(b) Discuss the rôle of bio fermenter in microbial culture.

13. (a) Outline the symptoms of Rabies.

Or

(b) Write short note on single cell protein.

14. (a) Explain the characteristics of antigens.

Or

(b) Explain the characteristics and functions of interferons.

15. (a) Write short note on whole vaccines.

Or

(b) Explain the concept of auto immunity.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Describe the structure of E.coli bacteria.

Or

(b) Elaborate the Whittakkar's five kingdom concept of classification.

17. (a) Elaborate the sterilization of glass wares.

Or

(b) Explain the different methods of bacteria culture.

18. (a) Discuss the causes and symptoms of tuberculosis.

Or

(b) Summarize the preservation of Milk.

Page 5 Code No. : 30384 E

19. (a) Thymus is a primary lymphoid organ. Discuss.

Or

(b) Elaborate the role of plasma cells and T cells in developing immunity.

20. (a) Explain the types of organs graft.

Or

(b) Elaborate the major histo compatibility complex.

Page 6 Code No. : 30384 E