

Code No. : 30373 E Sub. Code : AMBO 63

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

Sixth Semester

Botany - Core

MICROBIOLOGY

(For those who joined in July 2020 only)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. Who is known as the father of Microbiology?
 - (a) Edwin John Butler
 - (b) Ferdinand Cohn
 - (c) Robert Koch
 - (d) Anton van Leeuwenhoek
2. Vaccination was invented by
 - (a) Watson
 - (b) Jenner
 - (c) Crick
 - (d) Pasteur

3. The portion of the growth curve where rapid growth of bacteria is observed is known as
 - (a) Lag phase
 - (b) Logarithmic phase
 - (c) Stationary phase
 - (d) Decline phase
4. The shape of the TMV is _____
 - (a) Rod-shaped
 - (b) Oval shaped
 - (c) Cuboidal shaped
 - (d) Spherical shaped
5. Viruses that infect the bacteria are called _____
 - (a) Virophage
 - (b) Lysophage
 - (c) Bacteriophage
 - (d) Virions
6. Which of the following is a symptom of AIDS?
 - (a) Fever
 - (b) Swollen lymph nodes
 - (c) Tiredness
 - (d) All of the above
7. Acetic acid and lactic acid are used for _____
 - (a) curing meats
 - (b) preservation of color
 - (c) preservation of pickles
 - (d) inhibiting mold growth

Page 2 Code No. : 30373 E

8. Which of the following are produced by microorganisms?
 - (a) Alcoholic beverages
 - (b) Fermented dairy products
 - (c) Breads
 - (d) All the above
9. What is the principle of centrifugation?
 - (a) Sedimentation principle
 - (b) Filtration principle
 - (c) Evaporation principle
 - (d) Size reduction principle
10. Which among the following helps us in getting a three dimensional picture of the specimen?
 - (a) Phase contrast Microscope
 - (b) Electron Microscope
 - (c) Compound Microscope
 - (d) Simple Microscope

Page 3 Code No. : 30373 E

PART B — (5 × 5 = 25 marks)

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

Each answer should not exceed 250 words.

11. (a) Write a short notes on contributions of Robert Koch.
Or
(b) Describe the different types of nutrition in bacteria.
12. (a) Comment on the factors affecting the growth of bacteria.
Or
(b) Point out the beneficial role of bacteria.
13. (a) Give an account on general characters of viruses.
Or
(b) Outline the structure of TMV
14. (a) Infer about the production of vitamin B 12.
Or
(b) Discuss about the bacterial flora in milk.

Page 4 Code No. : 30373 E

[P.T.O.]

15. (a) Construct the structure of fermentor.

Or

(b) Comment the working principle of phase contrast microscope.

PART C — (5 × 8 = 40 marks)

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

Each answer should not exceed 600 words.

16. (a) Give a brief account on the contributions of Anton von Leeuwenhoek.

Or

(b) Describe the ultrastructure of bacteria with a neat illustration.

17. (a) Define bacterial growth. What are different phases of bacterial growth?

Or

(b) Discuss about the transformation and conjugation of bacteria.

18. (a) Evaluate the structure and reproduction of HIV.

Or

(b) Organize about the structure of bacteriophage.

Page 5 Code No. : 30373 E

19. (a) Describe the steps involved in citric acid production.

Or

(b) Write an essay on pasteurization of milk.

20. (a) Discuss about the working mechanism of electron microscope.

Or

(b) Briefly explain about the spectrometer.

Page 6 Code No. : 30373 E