

C 62604

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Name.....

Reg. No.....

SECOND SEMESTER (CUCBCSS—UG) DEGREE EXAMINATION, MAY 2019

B.Sc. Biotechnology

BTY 2B 02—GENERAL MICROBIOLOGY

Time : Three Hours

Maximum : 80 Marks

Section A

Answer any two out of four questions in about 1,500 words.

Each question carries 10 marks.

1. Describe in brief the life cycle of lytic and lysogenic phages.
2. Describe the pentose phosphate pathway.
3. Write a note on Koch's postulates and the role in determining the cause of diseases.
4. Discuss the different mechanisms exhibited by bacteria for acquiring energy.

(2 × 10 = 20 marks)

Section B

Answer any seven out of fourteen questions in about 750 words.

Each question carries 5 marks.

5. Describe the procedure followed for Gram's staining.
6. What are the symptoms and cause of typhoid ?
7. Write a brief note on sexual and asexual reproduction in bacteria.
8. What are facultative anaerobes ?
9. What is the germ theory ?
10. Differentiate between fermentation and respiration.
11. Describe the pour plate technique for initiating cultures ?
12. List major physical factors affecting microbial growth.
13. What are the different morphologies observed among bacteria ?
14. How is acidfast staining done ?
15. What is the role of the bacterial cell membrane ?

Turn over

16. How are bacteria in a culture identified ?
17. What are the primary barriers that the human body has to protect from diseases ?
18. What are the different types of mycoses ?

(7 × 5 = 35 marks)

Section C

Answer all questions in about 300 words.

Each question carries 3 marks.

19. What is the "periplasmic space" ?
20. What is a "pure culture" ?
21. What is the use of potato dextrose agar ?
22. What are methanogens ?
23. How can increase in microbial mass be monitored ?

(5 × 3 = 15 marks)

Section D

Answer all questions in about 200 words.

Each question carries 2 marks.

24. What is a "wet mount" ?
25. What is a spheroplast ?
26. What is immunization ?
27. Give an example of a disease caused by a retrovirus ?
28. What are different rod-shaped bacteria called ?

(5 × 2 = 10 marks)