

Reg.No.:



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.



Question Paper Code: 9006

B.E. / B.Tech. DEGREE SUPPLEMENTARY EXAMINATIONS – FEB. / MAR. 2020

Third Semester

Biotechnology

U15BT303 - MICROBIOLOGY

(Regulation 2015)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

PART – A

(10 x 2 = 20 Marks)

1. Write a note on Germ theory of diseases.
2. Why Antony Von Leeuwenhoek called as 'Father of Microbiology'?
3. Give the significance of Fungi.
4. Write the difference between the Gram positive and Gram negative cell wall.
5. Why do foods containing a high concentration of salt or sugar usually not require refrigeration to prevent their spoilage?
6. What are the purposes of carrying out the streak plate and pour plate techniques in microbiology?
7. Define Thermal Death Time.
8. What are the methods of measuring microbial growth?
9. List the commonly used biofertilizers.
10. Write about bioremediation.

PART – B

(5 x 13 = 65 Marks)

11. a) With suitable diagram, explain the image formation in scanning electron microscope.
(OR)
b) Elaborate the flagellar staining method.
12. a) Account for the steps undergone by the yeast to multiply.
(OR)
b) Impart your knowledge on the structural organization and the multiplication steps showcased by bacteria.
13. a) Discuss the normal growth cycle of bacteria with neat sketch and give the equation to calculate number of generations.
(OR)
b) Classify the microorganisms based on its nutritional requirement & explain about them.
14. a) Outline the various factors affecting bacterial growth and describe the different methods to quantitate their growth.
(OR)
b) Explain in detail about the involvement of physical agents in controlling microbial growth.
15. a) Write in detail about bio-pesticides. Explain atleast 5 commonly employed microorganisms that are used for pollution control.
(OR)
b) How Vitamin B12 is produced in industries? Describe with the flow diagram.

PART – C

(1 x 15 = 15Marks)

16. a) Explain in detail about the life cycle of virus. Also describe why virus depends on host cell for its replication.
(OR)
b) Summarize the various industrial production of penicillin.
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