

B.TECH. DEGREE EXAMINATIONS: NOV/DEC 2010

Third Semester

BIO TECHNOLOGY

BTY105: Microbiology

Time: Three Hours

Maximum Marks: 100

Answer ALL Questions:-

PART A (10 x 1 = 10 Marks)

1. The ability of a microscope to distinguish two adjacent point as distinct is through
A) Numerical aperture B) Resolution C) Magnification D) wavelength
2. What chemical compound is responsible for the acid-fast property of mycobacteria?
A) Peptidoglycan B) Ribose C) Mycolic acid D) Polysaccharide
3. The best example for Prokaryote is
A) Plants B) viruses C) Fungi D) Bacteria
4. The virus which affects the bacteria is
A) Pox virus B) Bacteriophage C) Hepatitis virus D) TMV
5. Microorganisms, which are capable of synthesising their own nutritional requirements are called as
A) Phagotrophs B) Lithotrophs C) Autotrophs D) Organotrophs
6. Blood agar is a/an
A) Enrichment Media B) Selective Media C) Enriched Media D) Transport Media
7. What is Sterilization?
A) Growing of Microorganisms B) Killing of Microorganism
C) Reproduction of Bacteria D) Fertilization of a cell
8. Tuberculosis is a
A) Skin disease B) Respiratory disease C) Urinary infection D) Disease of Eye
9. Which is the Biofuel in the following?
A) Petrol B) Ethanol C) Citric acid D) Lysine
10. Penicillin is an
A) Antidot B) Antibody C) Antibiotic D) Vitamine

PART B (10 x 2 =20 Marks)

11. Explain Koch's Postulates.
12. Give the principle of Gram staining.
13. What do you understand by the term Endospore?
14. List out the applications of Yeast.
15. Define Enriched media.
16. What is generation time?
17. Write the principle of autoclave and give its uses.
18. Define Dermatophytosis.
19. What are Biosensors?
20. Give the composition of Biogas.

PART C (5 x 14 =70 Marks)

21. a) Explain the principle and applications of Light Microscope. **(OR)**
- b) Explain the principle and procedure for the following.
- (i) Grams staining (7)
 - (ii) Acid fast staining (7)
22. a) Distinguish between the Gram Positive cell wall and Gram Negative cell wall. **(OR)**
- b) Explain the lytic and lysogenic life cycle of bacteriophage.
23. a) Describe the types of Pure culture techniques. **(OR)**
- b) Explain the Bacterial growth curve and factors affecting the microbial growth.
24. a) What is chemotherapy? Explain in details. What are antibiotics and how are they used in treatment of diseases? **(OR)**
- b) Explain the Microbial diseases of the digestive system with examples.
25. a) List out and explain the food preservation techniques with examples. **(OR)**
- b) Define Bio-pesticides. Explain the process of production and their applications.
