Reg. No. : | | | | | | | | | | | | |

Question Paper Code: 2143045

B.E. / B.Tech. DEGREE EXAMINATIONS, NOV/ DEC 2024
Third Semester
Biomedical Engineering
U20BM302 - PATHOLOGY AND MICROBIOLOGY
(Regulation 2020)

Time: Three Hours Maximum: 100 Marks

Answer ALL questions

PART – A (10 x 2 = 20 Marks)

1. Name the principle behind functioning of a fluorescence technique.

2. Can fungal infections be treated with antibiotics? Why.

3. Outline the feature of edema in pathology.

4. Contrast acute lymphoblastic and myeloblastic leukaemia.

5. How does light microscopy differ from electron microscopy?

6. Interpret the doubling time of bacteria.

7. Name a common autosomal recessive disorder.

8. How do helminths affect the immune system?

9. List the two types of passive acquired immunity.

10. Recall the immunological function of Radio immuno assay to detect infection.

PART – B (5 x 16 = 80 Marks)

11. (a) Outline the human virus and fungi with neat structure. (16)

(OR)

(b) Summarize the clinical significance of AFB staining in the diagnosis of tuberculosis and other mycobacterial infections. (16)

12. (a) Discuss the pulmonary embolism is pathological diseases and explain its features. (16)

(OR)

(b) Classify the various stages of leukaemias with neat illustration. (16)

13. (a) Identify the working principle and operation of Scanning Electron Microscopy (SEM). (16)

(OR)

(b) Identify the methods used to measure bacterial growth and how these methods contribute to the accuracy of growth curve analysis. (16)

14. (a) Examine the current treatment options available for managing hypersensitivity disorders and their effectiveness in reducing symptoms. (16)

(OR)

(b) Compare and contrast the fungal, protozoal and helminthic diseases in terms of their transmission, lifecycle and pathogenic mechanisms. (16)

15. (a) Outline the application of RIA and ELISA with respect to immunology. (16)

(OR)

(b) Demonstrate the role of monoclonal antibodies in the development of vaccines and their effectiveness in combating infectious diseases. (16)

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