

B.Sc. Sem.-6 (Rep) Examination

CC-307

Biotechnology

October-2025

Time : 2-30 Hours]

[Max. Marks : 70

Q.1. Define Epidemiology. Write a detailed account of epidemiology's role in preventing, (14)
diagnosing and controlling diseases.

OR

Q.1.A. Write about bacterial endotoxins and exotoxins with examples. (7)

Q.1.B. Explain Koch's postulates and its limitations. (7)

Q.2. Explain how molecular genetics can help in the diagnosis of cancer. (14)

OR

Q.2.A. Write a note on the application of western blotting in disease diagnostics. (7)

Q.2.B. Discuss steps involved in monoclonal antibody production. (7)

Q.3. What are therapeutic Proteins? Discuss the uses of Insulin, streptokinase and Growth hormone. (14)

OR

Q. 3.A. Describe enzyme replacement therapy. (7)

Q.3.B. Outline the recent trends in cancer treatment. (7)

Q.4. Discuss the pathogenesis of AIDS (14)

OR

Q.4.A. Discuss the causes and symptoms of cystic fibrosis. (7)

Q.4.B. Explain in detail the pathogenesis and diagnosis of AIDS. (7)

Q.5. Short Questions (Any 7) (14)

- 1) Give the full form of INF.
- 2) Differentiate between DNA and RNA vaccines.
- 3) Define endemic and pandemic with examples.
- 4) Name any two types of PCR.
- 5) Define bioterrorism with one example.
- 6) List any two emerging infectious diseases.
- 7) Give examples of enzyme deficiency diseases.
- 8) What is HLA typing?
- 9) Give an example of a mosquito-borne viral emerging disease.
- 10) Name different categories of exotoxins.
- 11) What are DNA vaccines?
- 12) What is virulence?

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