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**Question Paper Code: UD306**

B.E./B.Tech. DEGREE EXAMINATION, APRIL 2024

Professional Elective

Biotechnology

21BTV306- MOLECULAR THERAPEUTICS AND DIAGNOSIS

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer All Questions

PART A - (10 x 2 = 20 Marks)

1. State the evolutionary growth of medicine level based on the periodic analysis of the medicine history ? CO2-App
2. Define about the concept of mechanism involved in the infectious process? CO1- U
3. “An accurate interpretation of the modern techniques introduction in the bacterial infection has created its beneficial impact in the medicine field”-Justify the following statement is correct or not CO2-App
4. Write note about the coliform infection's conventional diagnosis. CO1- U
5. Highlight the factors creating the plaque in the endothelial cells of artery parts of human body CO2-App
6. Write the significant effect of the lung infection histoplasmosis? CO1- U
7. Define the process of Targeted therapy drugs of cancer cells? CO1- U
8. What are the advantages of Targeted drug delivery system? CO1- U
9. Sketch out the instrumentation protocol of commonly used probes in fluorescence in situ hybridization (FISH)? CO2-App
10. Write a note on DNA Microarray and its types? CO1- U

PART – B (5 x 16= 80 Marks)

11. (a) Summarize a detailed description about the principles of infectious diseases and modes of transmission for the infectious agents CO1- U (16)

Or

- (b) Describe in detail about the chronic, genetic condition that causes patients to produce thick and sticky mucus, inhibiting their respiratory, digestive, and reproductive systems with statement of disease diagnosis are also be highlighted. CO1- U (16)
12. (a) Illustrate the concept of mechanism that underlies the clinical diagnostic procedure for patients infected with viruses, emphasizing the use of antibiotics to treat the alterations that arise in the human system. CO3-Ana (16)
- Or
- (b) Distinguish the mechanism that underlies in the clinical diagnostic procedure for patients infected with hepatitis and pox viruses as well as justify the use of antibiotics to treat the alterations that arise in the human system CO3-Ana (16)
13. (a) Describe the prediction with the modern technique of metabolic syndrome diabetes mellitus with diagrammatic representation CO1- U (16)
- Or
- (b) Explain in detail about the process which determines the coagulant pathway in the biological injury process CO1- U (16)
14. (a) Illustrate a report on types of targeted therapy with illustrations, advantages and disadvantages. CO2- App (16)
- Or
- (b) Distinguish the various parameters involved in the active and passive targeting design CO2- App (16)
15. (a) RT-PCR has undergone tremendous advances over the past few years, and technologies have noticeably matured. Discuss in detail CO2- App (16)
- Or
- (b) Demonstrate the report of the methodologies for the detection of single-copy DNA by flow cytometry with the incorporation of signal amplification technologies CO2- App (16)