

School of Basic and Applied Sciences

BioScience
ETE - Jun 2023

Time : 3 Hours

Marks : 100

Sem IV - C2UH402T - Molecular Diagnostics and Therapeutics

Your answer should be specific to the question asked

Draw neat labeled diagrams wherever necessary

1. Describe the challenges of hybridoma technology to produce monoclonal antibodies. K1 CO2 (5)
2. Explain virulence factors with examples. K2 CO1 (5)
3. Enlist the applications of molecular diagnostic techniques. K1 CO1 (5)
4. Discuss the working principle and applications of indirect and sandwich ELISA. K2 CO2 (10)
5. Discuss the structure and function of five types of immunoglobulin isotypes. K4 CO4 (10)
6. Discuss the role of immunomodulators in immunotherapy and organ transplantation. K3 CO3 (10)
- 7) Discuss the properties and applications of stem cells in immunotherapy. K3 CO3 (10)

OR

- Describe the mechanism of host-pathogen interaction in detail. K3 CO3 (10)
- 8) Compare various types of biomarkers and their application in drug development. K4 CO4 (15)

OR

- Explain the role of biomarkers in molecular diagnostics with example. K4 CO4 (15)
9. Identify the key functions of complement system and compare the activation mechanism of the classical, lectin and alternative pathway. K3 CO3 (15)
 10. Describe types and applications of SNPs. K4 CO3 (15)