

The West Bengal University of Health Sciences
M.D. (Biochemistry) May - June, 2022 Examination

Paper III

Full Marks:100

Time : 3hours

Attempt all questions

1. Illustrate the differences between tumour suppressor genes and oncogenes with examples. How are protooncogenes activated to oncogenes. 5+5
2. Write short notes on : 5+5
 - a) Genetic diversity of immunoglobulin molecules
 - b) Immunologic of different classes of immunoglobulin molecules.
3. Briefly outline principal steps of recombinant DNA Technology. Write a short note on DNA cloning. 5+5
4. Briefly discuss DNA finger printing and DNA footprinting. 5+5
5. Describe the sources and different types of stem cells. Describe their potential uses in the field of regenerative medicine. Discuss the ethical and legal issues related to the use of stem cells for their use in humans. 3+4+3
6. Write short notes on : 5+5
 - a) FISH
 - b) DNA vaccines
7. Give the function and structural features of proteins affecting eukaryotic gene expression. 10
8. Write a short note on laboratory investigation in metabolic bone diseases. Enumerate factors affecting estimation of free calcium. 10
9. Discuss emerging cancer biomarkers. 10
10. Name the disease occurred due to oxidative stress. Classify anti oxidant and give examples. 4+6