



# CBCS SCHEME

15BT81

## Eighth Semester B.E. Degree Examination, July/August 2021 Clinical and Pharmaceutical Biotechnology

Time: 3 hrs.

Max. Marks: 80

**Note: Answer any FIVE full questions.**

- 1 a. Compare CBER and CDER with respect to their functioning. Add a note on the role of IND. (08 Marks)  
b. "Finding a lead is the most critical aspect of drug discovery". Substantiate. (08 Marks)
- 2 a. Distinguish between the processes of wet and dry granulation. (08 Marks)  
b. Distinguish between Elixirs, syrups and solutions. (08 Marks)
- 3 a. How does phase 1 drug metabolism differ from phase 2 drug metabolism? (08 Marks)  
b. Differentiate between Agonists and Antagonists citing suitable examples. (08 Marks)
- 4 a. Define pharmacokinetic. Explain drug elimination in detail. (08 Marks)  
b. Differentiate between LD<sub>50</sub>, ED<sub>50</sub> and TD<sub>50</sub> and graphically plot the curves. Arrive at a formula for therapeutic index. (08 Marks)
- 5 a. Differentiate between Biguanides and sulfonylureas with respect to their mode of action. (08 Marks)  
b. Distinguish between the 4 phases of migraine. Add a note on the therapy. (08 Marks)
- 6 a. With relevant examples explain the classification of drugs based on their pharmacodynamic properties. (08 Marks)  
b. What are the different treatment regimen for Alzheimer's disease? (08 Marks)
- 7 a. With respect to stem cells, differentiate between the following terms:  
i) Adult and Embryonic stem cells.  
ii) Totipotent, multipotent and pluripotent. (08 Marks)  
b. Give an account of liposomes and nanoparticle based drug delivery systems. (08 Marks)
- 8 a. Differentiate between factors VIII a and factor VIII concentrates. (08 Marks)  
b. Explain the application of epidermal stem cells in skin replacement. (08 Marks)
- 9 a. Give an account of the ethics pertaining to clinical research. (08 Marks)  
b. What are the 3 critical assumptions of case control studies? (08 Marks)
- 10 a. Give an account of placebo trials and placebo responses. (08 Marks)  
b. "Participant's rights are protected by the Institutional Review Board". Substantiate. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and /or equations written eg. 42+8 = 50, will be treated as malpractice.