



CBCS SCHEME

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18BT72

Seventh Semester B.E. Degree Examination, June/July 2024 Clinical & Pharmaceutical Biotechnology

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions, choosing ONE full question from each module.

Module-1

- 1 a. Rapid onset of action, avoid 1st pass metabolism and complete bioavailability of drugs. Formulate a drug preparation by analyzing the above parameter. (10 Marks)
- b. Identify the different components in the formulation of tablets and add a note on its stability. (10 Marks)

OR

- 2 a. Inventory drug molecule from scratch until it reaches market elucidate the process. (10 Marks)
- b. Formulate API and the needed excipients in ointment preparation keeping quality control aspect in mind. (10 Marks)

Module-2

- 3 a. "Cytochrome P450 (CYP) is a haemoprotein that plays a key role in the metabolism of drugs and other Xenobiotics" Elaborate. (10 Marks)
- b. Drugs are made more polar during the metabolism. Illustrate the process. (10 Marks)

OR

- 4 a. "Pharmacodynamics is the study of a drug's molecular, biochemical and physiologic effects or actions" Elucidate. (10 Marks)
- b. Comment on LADME concept in pharmacokinetics studies. (10 Marks)

Module-3

- 5 a. In a situation where only selective relief of pain without blocking the conduction of nerve impulses or affecting consciousness, recommend the drug therapy administered. (10 Marks)
- b. To relieve the symptoms of menopause and to replace the hormones at the lower level, suggest the therapy and a side effect associated with it. (10 Marks)

OR

- 6 a. A person complaining about acid indigestion, sour stomach, heart burn and discomfort. Analyse the case and depict the suggestive therapy. (10 Marks)
- b. "Substance produced by one micro organism that selectively inhibits the growth of another microbe interpret with mechanism of actions. (10 Marks)

Module-4

- 7 a. "The whole blood which is a mixture of cells, colloids and crystalloids can be separated into different blood components". Implicit its components and separation method. (10 Marks)
- b. "Insulin is modified to enhance its property to treat hypoglycemic condition" Interpret the modified state and its application. (10 Marks)

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.

OR

- 8 a. Biodegradable drug delivery system as provided a new avenue for drug delivery. Illustrate. (10 Marks)
- b. A virus infected cells produces a signaling components causing nearby cells to heights their antiviral defences. Identify the component and its biotherapeutic action. (10 Marks)

Module-5

- 9 a. "Pharmacovigilance is the science and activities relating to detection, assessment understanding and prevention of adverse effects of medicine" comment. (10 Marks)
- b. The power of mind to influence the body overpowers the therapeutic effect". Enumerate the statement. (10 Marks)

OR

- 10 a. The stage of research that begins before clinical trials and during which important feasibility, iterative testing and drug safety data are collected. Identify the research state and its impact. (10 Marks)
- b. In the drug development process to rule out new drug's potential adverse effects various toxicity studies are conducted, interpret the studies and its dimension in analyzing the threat of a new drug. (10 Marks)

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