

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2024
(Sixth Semester)

Branch – BIOCHEMISTRY

**DISCIPLINE SPECIFIC ELECTIVE – II PHARMACOKINETICS &
CLINICAL TRIALS**

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(5 x 1 = 5)

- 1 Pick out the drug obtained from microorganisms.
(i) Penicillin (ii) Digitoxin
(iii) Amoxicillin (iv) Procaine
- 2 The following solid dosage form intended for the insertion in the anus
(i) aerosol (ii) suppositories
(iii) ointments (iv) gases
- 3 Which of the following is not caused by the activation of the sympathetic nervous system?
(i) An increase Ca²⁺ release in cardiomyocytes
(ii) An increase in cardiac output
(iii) A decrease in heart rate
(iv) An increase in blood pressure
- 4 Which of the following reaction is a phase I metabolic reactions?
(i) Sulphation (ii) Methylation
(iii) Acetylation (iv) Oxidation
- 5 Which of the following is NOT associated with Phase 0 clinical trials?
(i) Confirmation of pre-clinical studies incorrect
(ii) ~ 100 participants correct
(iii) Sub-clinical doses incorrect
(iv) Healthy volunteers

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 3 = 15)

- 6 a Explain the types of drug receptors.
OR
b Bring out the mechanism behind Multi-drug resistance.
- 7 a Classify the route of drug administration.
OR
b Narrate the factors affecting drug absorption.
- 8 a Outline the principle behind the SAR of a drug.
OR
b Summarize the mode of action of quinine.
- 9 a Explain the Phase II reactions of the drug with suitable examples.
OR
b Describe the mechanism of drug tolerance.
- 10 a Describe the WHO guideline for the quality of standard herbal formulations.
OR
b Comment on personalized drugs.

Cont...

SECTION -C (30 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** Marks

(5 x 6 = 30)

- 11 a Discuss the binding forces of drug-receptor interaction.
OR
b Analyze the sources of the drug.
- 12 a Discuss the renal elimination of drugs.
OR
b Enumerate the tissue permeability during drug distribution.
- 13 a Elucidate the mode of action of any 2 drugs acting on CNS.
OR
b Highlight the role of chemotherapeutic drugs.
- 14 a Elucidate Phase I reactions with examples.
OR
b Outline the effects of drug toxicity in humans.
- 15 a Describe the types of clinical trials.
OR
b Justify the ICMR ethical guidelines for medical research in humans.

Z-Z-Z

END