

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2023
(Sixth Semester)

Branch – BIOCHEMISTRY

**DISCIPLINE SPECIFIC ELECTIVE – II : PHARMACOKINETICS AND
CLINICAL TRIALS**

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (10 x 1 = 10)

- 1 Label the strong forces of Drug – Receptor interaction
(i) Covalent bond (ii) Ionic bond
(iii) Hydrogen bond (iv) Coordinate covalent bond
- 2 Identify the source of Penicillin
(i) Bacteria (ii) Algae
(iii) Fungi (iv) Plant
- 3 Which drug distribute easily through Blood Brain Barrier?
(i) Polar drug (ii) Cationic drug
(iii) Anionic drug (iv) Non polar drug
- 4 Indicate the major route of drug elimination.
(i) Skin (ii) Kidney
(iii) Lungs (iv) Liver
- 5 Mention the Aminoglycosidic drug
(i) Carbapenems (ii) Cephalosporins.
(iii) Monobactams (iv) Streptomycin
- 6 Name the precursor of Dopamine.
(i) Ibuprofen (ii) Dapsone
(iii) Levo Dopa (iv) Flucanazole
- 7 Find the type of reaction is involved in the formation of Sulphonamide from Prontosil
(i) Alkylation (ii) Deamination
(iii) Azo reduction (iv) Nitro reduction
- 8 Identify the Micosomal phase – II reaction
(i) Glucuronic acid conjugation (ii) Mercapturic acid synthesis
(iii) Hydroxylation (iv) Dehalogenation
- 9 Which one is related to Placebo concept?
(i) Active substance (ii) Inactive substance
(iii) Organic substance (iv) Inorganic substance
- 10 Identify the preclinical study experiments
(i) Experiments on Humans (ii) Experiments on Animals
(iii) Experiments using software (iv) Experiments using simulations

Cont...

SECTION - B (35 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks

(5 x 7 = 35)

- 11 a Classify drugs.
OR
b Outline the Multi Drug Resistance(MDR) mechanism.
- 12 a How protein binding affect drug distribution?
OR
b Summarize the mechanism of drug elimination through kidney.
- 13 a Sketch the structure and mechanism of action of Aspirin.
OR
b Show the structure and Pharmacodynamics of Sulphonamide.
- 14 a Describe the mechanism of cytochrome P⁴⁵⁰ in drug metabolism.
OR
b Explain drug tolerance.
- 15 a Outline the ethical guidelines of ICMR to biomedical research.
OR
b Describe the standardization parameters for herbal drugs.

SECTION - C (30 Marks)

Answer any THREE Questions

ALL Questions Carry EQUAL Marks

(3 x 10 = 30)

- 16 Examine the types of drug receptors.
- 17 Discuss the factors that affect the drug absorption.
- 18 Elucidate the mechanism of action of Isoniazid and streptomycin.
- 19 Summarize the reaction mechanism of Glucuronic acid conjugation.
- 20 Outline the Care and use of animal in scientific research (CPCSEA) guidelines.

Z-Z-Z

END