

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

MSc DEGREE EXAMINATION DECEMBER 2022
(Third Semester)

Branch – BIOTECHNOLOGY

**DISCIPLINE SPECIFIC ELECTIVE – II: PHARMACEUTICAL
BIOTECHNOLOGY**

Time: Three Hours

Maximum: 50 Marks

SECTION-A (5 Marks)

Answer ALL questions

ALL questions carry EQUAL marks (5 x 1 = 5)

- 1 A chemical compound that affects human metabolism and provides cure from diseases is called _____.
(i) poison (ii) medicine
(iii) enzyme (iv) hormone
- 2 The classification of drugs based on _____ is the most useful one for medicinal chemists.
(i) pharmacological effect (ii) drug action
(iii) chemical structure (iv) molecular targets
- 3 Which of the following statements best describes a lead compound?
(i) A compound that contains the element lead
(ii) A compound from the research laboratory that is chosen to go forward for preclinical and clinical trials
(iii) A molecule that shows some activity or property of interest and serves as the starting point for the development of a drug.
(iv) The first compound of a structural class of compounds to reach the market.
- 4 What are the characteristics of continuous release systems?
(i) Release the drug along the entire length of GIT
(ii) Prolonged their residence in the GIT and release
(iii) Release only at a specific drug
(iv) Release as soon as comes in contact to the saliva
- 5 _____ Cytokine is produced by a plasmacytoid dendritic cell when it detects a virus infected cell. The compound in turn "warns" neighboring cells about the virus attack.
(i) Interferon-alpha (ii) Complement C3b
(iii) IL-1beta (iv) Interferon-gamma

SECTION - B (15 Marks)

Answer ALL Questions

ALL Questions Carry EQUAL Marks (5 x 3 = 15)

- 6 a What are the four stages of pharmacokinetics?
OR
b List out the routes of drug administration.
- 7 a Why drug interaction is important?
OR
b How do you detox your body?

Cont....

- 8 a Outline the four phases of clinical trials.
OR
b Enlist the steps involved in drug discovery.
- 9 a Analyze the characteristics of drug delivery system.
OR
b Highlight the use of nasal drops and its preparation.
- 10 a Which interleukins are inflammatory?
OR
b Is Ayurveda scientifically proven? Which diet is considered ideal in Ayurveda?

SECTION -C (30 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Elaborate the factors modifying the drug action.
OR
b Analyze the different sources needed for the drug preparation.
- 12 a Make a note on the absorption and metabolism of drugs by kidney.
OR
b Highlight the drug response on CNS and autonomous nervous system.
- 13 a List the qualification of pharmacovigilance. Elaborate its types.
OR
b Elucidate the drug manufacturing and its regulatory issues.
- 14 a State the modulated drug delivery system.
OR
b Explain in brief about osmotic activated drug delivery systems.
- 15 a Illustrate the production of interleukins with a neat sketch.
OR
b Enlist the basic principles of quality control and quality assurance.

Z-Z-Z

END