

M. Sc. DEGREE EXAMINATION, APRIL 2024
BIOTECHNOLOGY
FOURTH SEMESTER

COURSE : ELECTIVE
PAPER : PHARMACEUTICAL BIOTECHNOLOGY
SUBJECT CODE : 19BY/PE/PB15
TIME : 3 HOURS

MAX. MARKS:100

SECTION – A

ANSWER ALL THE QUESTIONS

(10 x 2 = 20)

1. What is transdermal drug delivery?
2. Give examples of drugs with different bioavailability.
3. What are the polymers used in drug delivery system?
4. Which is the typical targets for drug discovery?
5. What is isotonicity?
6. What is the electrostatic layer by layer technique?
7. List the difference between heparin and hirudin.
8. Give examples of debriding agents.
9. Who is the father of clinical trials?
10. What are teratogenic drugs?

SECTION – B

ANSWER ALL THE QUESTIONS

(5 x 8 = 40)

- 11.a Define the concepts of average therapeutic dose, saturating dose and maintenance dose.
- (or)
- 11.b Enlist various factors influencing drug absorption through GIT.
- 12.a Give an account on stages of the drug discovery process.
- (or)
- 12.b Explain the importance of dosage form design in pre-clinical and clinical stages.
- 13.a Discuss microencapsulation and its importance in pharmaceutical biotechnology.
- (or)
- 13.b Summarize the general procedure for the manufacturing of parenteral products.
- 14.a Enumerate the mechanism of erythropoietin production.
- (or)
- 14.b Describe in detail about production of insulin by recombinant DNA technology.

- 15.a Describe the role of India in the global pharmaceutical market and impact of globalization on pharmaceutical industry in India.
- (or)**
- 15.b Explain the toxicological approach to drug development process.

SECTION – C

ANSWER ANY TWO QUESTIONS

(2 x 20 = 40)

16. Elaborate on broad spectrum antibiotics and its mode of action.
17. Discuss drug delivery mechanism in detail.
18. Explain in detail about types and phases of clinical research with post marketing surveillance.
19. Demonstrate different types of tablet manufacturing process? Add a note on sugar coating of compressed tablet.
