

PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)

BSc DEGREE EXAMINATION MAY 2023  
(Sixth Semester)

Branch – BIOTECHNOLOGY

BIOPHARMACEUTICALS

Time: Three Hours

Maximum: 75 Marks

SECTION-A (10 Marks)

Answer ALL questions

ALL questions carry EQUAL marks

(10 x 1 = 10)

1. Who makes the active components of medicines?  
(i) pharmacists      (ii) chemists      (iii) doctors      (iv) pharmacologists
2. Organised drug is also known as  
(i) cellular drug      (ii) acellular drug  
(iii) unicellular drug      (iv) multicellular drug
3. Pharmacodynamics involves the study of following  
(i) mechanism of drug action  
(ii) biotransformation of drug in the organism  
(iii) distribution of drug in the organism  
(iv) excretion of drug in the organism
4. Target protein which drug molecules binds are  
(i) only receptor      (ii) only ion carrier  
(iii) only carrier      (iv) all the above
5. The first step in drug discovery process is  
(i) lead modification      (ii) lead identification  
(iii) lead verification      (iv) lead optimization
6. International average time for drug to be discovered involves  
(i) 10 years      (ii) 2 years      (iii) 5 years      (iv) 25 years
7. Which one of the following is not a route of administration?  
(i) intravenous      (ii) oral      (iii) topical      (iv) dissolution
8. Pharmaceutical powder can be produced by  
(i) precipitation      (ii) crystallization      (iii) fusion      (iv) i & ii
9. The efficiency of a drug is not dependent on which of the following parameter?  
(i) Activity      (ii) Stability  
(iii) Selectivity      (iv) General targeting
10. Which of the following cytokines has not been engineered for immunostimulation or therapeutic values?  
(i) IL-2      (ii) IL-6      (iii) IL-13      (iv) IL-1

SECTION - B (25 Marks)

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 5 = 25)

11. a. Describe the need for pharmaco economics evaluation.

(OR)

- b. Summerise the basic principle in drug formulation.

Cont...

12. a. Bring out the biotransformation of drug.  
(OR)  
b. State about the bioavailability of drugs.
13. a. Classify the drug development cycle  
(OR)  
b. Explain on pharmacovigilance.
14. a. State the industrial plant design.  
(OR)  
b. Outline on omega-3 fattyacid in human health.
15. a. Narrate about tumor necrosis factor.  
(OR)  
b. Describe the genesis of biopharmaceuticals from traditional medicine.

**SECTION -C (40 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks (5 x 8 = 40)

16. a. Analyse the sources of drug and preparation.  
(OR)  
b. Justify the drug dosage form.
17. a. Analyse the mechanism of drug action.  
(OR)  
b. Enumerate the effect of food on drug absorption.
18. a. Summarise on the identification of bioactive constituents from note.  
(OR)  
b. Discuss on quality management and its clinical chemistry.
19. a. Enumerate the process of curcumin production.  
(OR)  
b. Summarise the role of rDNA technology in drug manufacturing and its products.
20. a. Enumerate on the production of cytokine.  
(OR)  
b. Discuss the usage of oil in aroma therapy.

Z-Z-Z

END