

**PSG COLLEGE OF ARTS & SCIENCE  
(AUTONOMOUS)**

**MSc DEGREE EXAMINATION MAY 2023  
(Second Semester)**

Branch – **BIOTECHNOLOGY**

**MAJOR ELECTIVE COURSE – I:  
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 Cloves are used for toothache and it helps to soothe the pain. Clove is which part of the plant?  
(i) stem                      (ii) seed                      (iii) bud                      (iv) root
- 2 How are free radicals generated in the human body?  
(i) Through cytochrome P-450 system                      (ii) NADPH reductase  
(iii) Through cytochrome P-350 system                      (iv) NADPH cytochrome P-450 reductase
- 3 Pharmacovigilance deals about -----.  
(i) effects of drugs and mechanism of action  
(ii) analyze the risk, safety of medicine  
(iii) role of the drug of genome response  
(iv) biochemical and physiological effect of drug
- 4 Liposomes have half life -----.  
(i) shorter                      (ii) longer  
(iii) intermediate                      (iv) both (i) & (ii)
- 5 The characteristic property (ies) of cytokines is (are) ----- .  
(i) pleiotropy and redundancy                      (ii) synergy and antagonism  
(iii) cascade induction and amplification                      (iv) all the above

**SECTION - B (15 Marks)**

Answer **ALL** Questions

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

- 6 a Summarize the routes of drug administration.  
OR  
b Comment on AYUSH and its governance.
- 7 a State the adverse effects of drug.  
OR  
b Infer the role of cytochrome p450 in xenobiotic metabolism.
- 8 a Mention the significance of drug identification.  
OR  
b Highlight the advantages of novel drug discovery.

**Cont...**

- 9 a Why are polymers used in drug delivery? Explain its advantages and limitations.  
OR  
b How does pH in the body affect drug delivery? Interpret with suitable example.
- 10 a Distinguish between GLPs and GMPs.  
OR  
b Which proteins are used as therapeutic agent?

**SECTION -C (30 Marks)**

Answer ALL questions

ALL questions carry EQUAL Marks

(5 x 6 = 30)

- 11 a Analyze the importance of herbal medicine in India.  
OR  
b How do you calculate drug dosage?
- 12 a Evaluate detoxification mechanism by liver.  
OR  
b Discuss the types of drug receptor interactions.
- 13 a Explain the steps involved in drug discovery.  
OR  
b Describe drug toxicity.
- 14 a How are nano particles used in drug delivery? Name few examples.  
OR  
b Expound enzyme activated drug delivery systems.
- 15 a Summarize the production method of probiotics.  
OR  
b Elaborate drug safety and assessment.

Z-Z-Z

END