

School of Biological and Life sciences

**Bachelor of Science Honours in Biomedical Science
Semester End Examination - Jun 2024**

**Duration : 180 Minutes
Max Marks : 100**

Sem II - P1UA203B - Toxicology and Pharmacology*General Instructions*

Answer to the specific question asked

Draw neat, labelled diagrams wherever necessary

Approved data hand books are allowed subject to verification by the Invigilator

- 1) What is the difference between toxic agent and poison? K1(2)
- 2) How does biomagnification occur in food chains, and what are its implications for higher trophic levels? K2(4)
- 3) Explain the concept of chronic toxic responses, highlighting the differences between acute and chronic toxicity. Provide examples of chronic toxicants and discuss their long-term effects on human health. K2(6)
- 4) Discuss the characteristic features of acute toxic responses and provide examples of substances that commonly induce acute toxicity. Additionally, elaborate on the physiological mechanisms underlying acute toxic reactions in the body. K3(9)
- 5) Discuss the process of drug absorption in the body, including the factors that influence absorption rates. K3(9)
- 6) Discuss the therapeutic applications and potential side effects of beta-blockers in the management of cardiovascular diseases. K5(10)
- 7) What is Pharmacokinetics? Write the details steps involved in pharmacokinetics study. K4(12)
- 8) Compare and contrast the concepts of LD50, LC50, TD50, and therapeutic index, highlighting their respective applications and limitations in toxicological risk assessment. K5(15)
- 9) How do nonsteroidal anti-inflammatory drugs (NSAIDs) target cyclooxygenases to mitigate inflammation and pain? Discuss the mechanism of action of NSAIDs in inhibiting COX activity K5(15)
- 10) Explore how dose-response relationships are utilized in risk assessment and regulatory decision-making processes. K6(18)