

PG CBCS
M.Sc. Semester-IV Examination, 2021
MEDICAL LABORATORY TECHNOLOGY
PAPER: MLT 401
(FORENSIC SCIENCE)

Full Marks: 40

Time: 2 Hours

Answer any FOUR questions of the following:

10X4=40

1. What is the aim of forensic pharmacology? Write the comparison between ED₅₀ and LD₅₀. What is therapeutic window and therapeutic index? Why is biotransformation of drug essential? 2+2+3+3
2. What is Hofmann elimination? Make list of enzymes in phase-i and phase-ii reactions of poison metabolism. Why is phase-II reaction known as conjugation reaction? 2+6+2
3. What is STR? What do you mean by STR profiling? Describe the procedure of STR analysis for criminal identification. 2+2+6
4. What do you mean by drunkenness? Make the list of different stages of drunkenness with their specific signs and symptoms. What is breath analyzer and its use in forensic science? 2+5+3
5. Define poison. Classify poison with symptoms and examples. State your views whether therapeutic drugs can be considered as poison. What is anti-dote? 2+5+2+1
6. What is 'viscera'? How will you collect and preserve the viscera of a dead person? What are the physical and chemical tests on viscera can be done in forensic science? 2+4+4
7. Differentiate Y-STR with mt-DNA analysis. Describe the steps adopted in DNA fingerprinting. Write the applications of DNA fingerprinting in forensic science. 3+5+2
8. What is ionizing radiation? Describe the systematic pathological signs and symptoms of radiation exposure. Describe the mechanism of cell injury by ionizing radiation. 2+4+4