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Programme Name: MSc Toxicology, Semester-II, End Term Examination (2023-24)

Paper Name: **Forensic Toxicology** Paper Code: **MTX-CC-202**

Time: 2.5 h Maximum Marks: **60**

Note: This paper has 3 section A, B and C, Attempt all the three sections.

Section A: Answer all the questions; Section B: Answer any 4 out of 5; Section C: Answer 2 questions.

Abbreviations Used

CO-Course Outcome, PO-program Outcome, BTL-Bloom Taxonomy Level: BT level 1- Remember; BT level 2-Understand; BT level 3-Apply; BT level 4-Analyze; BT level 5- evaluate, BT level 6-Create.

SECTION A

Very short type questions. Attempt all the questions. **(Marks 1×20=20)**

Q. No.	Questions	Marks	BTL	CO	PO
1.	Forensic Science is the application of science and technology to the _____.	1	2	1	1
2.	Xi Yuan Lu is the first written testimony of the use of ____ and entomology to solve crimes.	1	1	2	1
3.	In law,_____of administration of a substance, makes the difference between medicine and poison.	1	1	2	1
4.	Death occurs within shortest duration with _____ Poisons	1	2	1	1
5.	An unusual toxic reaction resulting from the ingestion of certain plants is called as	1	3	4	2
6.	_____ naturally occurring non-biological volatile organic poison.	1	1	2	1
7.	Phase-contrast microscopy was first described by _____	1	2	1	1
8.	In_____chromatography, partition of molecules between gas (mobile phase) and liquid (stationary phase) occurs.	1	4	3	1
9.	RFLP needs high molecular weight DNA with average fragment size of about _____	1	2	1	1
10.	Thin Layer Chromatography is a technique used to isolate _____mixtures.	1	3	4	2
11.	Signs and symptoms of poisoning vary depending on the dose of poison. (T/F)	1	2	1	1
12.	DNA fingerprinting is a powerful tool for criminal identification in forensic toxicology. (T/F)	1	2	1	1
13.	Psychotropic drugs affect physiological processes and behavior. (T/F)	1	2	1	1
14.	Atomic absorption spectroscopy (AAS) measures the emission of light absorbed by atoms in the gas phase. (T/F)	1	3	4	2
15.	HPLC employs a high-pressure system to pump the stationary phase through a packed column. (T/F)	1	1	2	1

16.	GC is commonly used in forensic toxicology to analyze the volatile compounds. (T/F)	1	1	3	1
17.	Breathalyzer tests are commonly used to measure the quality of alcohol in a person's breath. (T/F)	1	2	1	1
18.	The analysis of illicit liquor involves identifying the quality of the beverage, including its origin and manufacturing process. (T/F)	1	3	4	2
19.	One the basis of intention, poisoning is of accidental, suicidal and homicidal types. (T/F)	1	1	2	1
20.	Mathieu Orfila is best known for his involvement in the "Lafarge" arsenic poisoning case in France. (T/F)	1	1	3	1

SECTION B

Short-type Questions. Attempt any five out of six questions. **(4 × 5 = 20)**

Q. No.	Questions	Marks	BTL	CO	PO
1.	Who is the father of forensic toxicology? Highlight his contribution in the field.	4	2	1	1
2.	Classify the poisons based upon the properties of poison.	4	2	1	1
3.	What is chromatography and its different types?	4	4	3	1
4.	What is the principle of UV-Vis spectroscopy and its applications?	4	2	1	1
5.	What are different types of body fluids and their applications used in forensic toxicology?	4	5	5	3
6.	What are the steps of RFLP techniques DNA fingerprinting?	4	5	5	3

SECTION C

Long answer-type Questions. Attempt any two out of four questions. **(10×2=20)**

Q. No.	Questions	Marks	BTL	CO	PO
1.	What are the basis of classification of poisons? Classify the on different basis.	10	2	1	1
2.	What is the principle of gas chromatography? Draw a labeled schematic diagram of instrumentation of gas chromatography and explain its working.	10	2	1	1
3.	What is electron microscopy? Explain its principle, types and applications in detail?	10	4	3	1
4.	Explain the postmortem injuries caused by poison and their significance in criminal investigation.	10	2	1	1

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