JAMIA HAMDARD
Department of Medical Elementology &Toxicology
School of Chemical and Life Sciences
Course Name: MSc Toxicology, Semester-I End term Examination (2022-23)

Paper Name: **Systemic Toxicology** Paper Code: **MTX-CC102**
Time: $2^{1/2}$ 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 and Section C attempt any two qquestions
Abbreviations Used
CO-Course Outcome, PO-program Outcome, BTL-Bloom Taxonomy Level: BT level 1-Remember; BT level 2-Understand; BT lelvel-3 Apply; BT level 4 Analyse; BT level 5- evaluate, BT level 6 Create

SECTION A

Very Short Type Questions **[1×20 =20]**

Q. No.	Question	Marks	BTL	CLO	PLO
1.	Fatty liver is caused by valproic acid. (True/False)	1	2	1	1
2.	CCL_4 and vitamin A causes fibrosis and cirrhosis. (True/False)	1	1	2	1
3.	Methotrexate causes crystalluria in acute renal fibrosis. (True/False)	1	1	2	1
4.	Chronic exposure of inhalation of cadmium containing dust and fumes at workplace leads to nephrotoxicity. (True/False)	1	2	1	1
5.	Which of the following is not a component of triad of chronic mercury toxicity: a. Gingivitis b) Pupillary dilation c) Tremors d)Erethism	1	3	4	2
6.	Which of the following is an acute event of toxicity: a. Hepatotoxicity caused by 3 doses of Paracetamol 500mg in a single day b. Hepatotoxicity caused by 3 doses of Paracetamol 325mg in a week c. Sudden toxicity due to an unknown cause d. None of the above	1	1	2	1
7. (2)	What is the difference between inhalation and respiratory toxicology?	1	2	1	1
8.	Paraquat causes toxicity in which target organ. a) Kidneys b)Lungs c)Liver d)Testis	1	4	3	1
9.	Copper in the body mostly remains bound to a) Plasminogen b)Albumin c)Ceruloplasmin d)Collagen	1	2	1	1
10.	Which of the following is an antidote for paraquat: a) EDTA b) Dimercaprol c) Sodium Nitrate d) Fuller's earth	1	2	1	1
11	Phthalates are a broad group of compounds that serve as plasticizers to impart flexibility and durability to products. (True/False)	1	1	2	1
12	Amphotericin B-induced nephrotoxicity is manifested as azotaemia, renal tubular acidosis, impaired renal concentrating ability and electrolyte abnormalities like hypokalaemia and sodium, magnesium wasting.(True/False)	1	1	2	1
13	How is COPD treated? a) Bronchodilators b) Inhaled corticosteroids	1	2	1	1

	c) Supplemental oxygen d) All of the above				
15	Female-specific endpoints of reproductive toxicity involved which hormone among the following: a) LH b) FSH c) progesterone d) All of these	1	3	4	2
16	Write the name of disease that causes by the inhalation of silica dust for a long time.	1	1	2	1
18	Biomagnification of DDT disturbs iron metabolism in birds leading to thinning of eggshells and its premature breaking or underdevelopment ceasing its hatching. (True /False)	1	2	1	1
19	Phthalates have also been studied to be associated with insulin resistance, a known risk factor leading to the development of type-2 diabetes mellitus. (True/False)	1	4	3	1
20	In acute hepatocellular injury: severe inflammation with necrosis and apoptosis seen in isoniazid (INH), aspirin, and phenytoin (True/false)	1	2	1	1

SECTION B

Short-type Questions. (Attempt any four questions) **[4×5=20]**

Q. No.	Question	Marks	BTL	CLO	PLO
1.	Explain the mechanism of action of ethyl alcohol in liver injury.	4	1	2	1
2.	Write the pharmacological mechanism of nephrotoxicity caused by Amphotericin B.	4	2	1	1
3.	Write in detail the *in vitro* and *in vivo* methods for assessment of reproductive injury	4	4	3	1
4.	Describe the acute and chronic toxicity associated with lung toxicants.	4	2	1	1
5	Discuss the in *vitro* and *in vivo* evaluation methods for renal risk associated with exposure of toxicants	4	2	1	1
6	How do you perform histological analysis of liver injury, explain it with suitable examples.	4	2	1	1
7	Explain the endpoints for assessment of male and female reproductive toxicity and their in vivo and in vitro methods of evaluation.	4	2	1	1

SECTION C

Long-type Questions. (Attempt any two questions) **[2×10 =20]**

Q. No.	Question	Marks	BTL	CLO	PLO
1.	Explain in detail about liver injury induced by paracetamol and the challenges related with intentional and unintentional use.	10	2	1	1
2	Explain the toxic effect of phthalates on male and female reproductive system.	10	2	1	1
3.	Describe the acute kidney injury associated with paraquat poisoning and their management	10	2	1	1
4.	What is particle clearance? Explain the lung injuries caused by nano-materials and responses of lungs against those injuries.	10	2	1	1