



MAL-003-0038601 Seat No. _____

**B. Voc. (Medical Laboratory &
Molecular Diagnostic Technology)**

(Sem. VI) (CBCS) Examination

March / April - 2018

MLMDT-6.1 : Therapeutic Drug Monitoring & Toxicology

Faculty Code : 003

Subject Code : 0038601

Time : $2\frac{1}{2}$ Hours]

[Total Marks : 70

- Instructions :**
- (1) All questions are compulsory.
 - (2) The paper is divided in two sections.
 - (3) Figures on right indicate marks.

Section - I

1 Answer the following : 20

- (1) What is Osmolal Gap ?
- (2) Write two disadvantages of oral route of drug administration.
- (3) Write the full form of HPLC.
- (4) Write one disadvantage of Immunoassay.
- (5) What is the source of Cocaine ?
- (6) What do you understand by drug addiction ?
- (7) Define loading dose.
- (8) If a pregnant woman abuses drugs, does it affect the fetus ? Yes/No ? Justify.

- (9) Give examples of Homicidal poison.
- (10) What are electroanalytical methods ?
- (11) What is generic drug ?
- (12) What is Proto oncogene ?
- (13) What is blotting ?
- (14) What is Plasma Half Life ?
- (15) What is the source of Cyanide poisoning ?
- (16) Electroosmotic flow rate in capillary electrophoresis is usually lower than the electrophoretic velocity. T/F
- (17) What is the result of Oncogene activation ?
- (18) Is Drug addiction a disease ? Justify.
- (19) What is branded drug ?
- (20) Why are inert gases used as mobile phase in GLC ?

Section - II

- 2** (a) Answer in brief : (Any 3) **3×2=16**
- (1) Describe in brief the rectal route of drug administration.
 - (2) Write a brief note on drug clearance.
 - (3) Enlist the sign and symptoms of Drug Abuse.
 - (4) Why inhalation route is effective ?
 - (5) Write in brief, principle of mass spectrometer.
 - (6) Draw block diagram of instrumentation of HPLC.

(b) Answer in brief : (Any 3) **3×3=9**

- (1) Differentiate among: full agonist, partial agonist and inverse agonist.
- (2) Write a note on FID.
- (3) Write a note on Enzyme Multiplied Immunoassay Technique.
- (4) What are the criteria of TDM ?
- (5) What are the characteristics of drugs to require monitoring ?
- (6) Write a note on microorganisms associated with cancer.

(c) Answer in detail : (Any 2) **2×5=10**

- (1) Write a note on parenteral routes of drug administration.
- (2) Write in detail on Fluorescence Polarization.
- (3) Write a note on detection techniques for HPLC.
- (4) Write a note on Interference of various agents.
- (5) Write a note on Biotransformation.

3 (a) Answer in brief : (Any 3) **3×2=6**

- (1) Enlist the sign and symptoms of carbon monoxide poisoning ?
- (2) Enlist the name of excretory organs.
- (3) Define mechanism of Opoid drug.
- (4) What is the principle of Western Blotting ?
- (5) Enlist the materials which are carcinogen.
- (6) What is the mechanism of actions of Poison ?

(b) Answer in brief : (Any 3) **3×3=9**

- (1) Write a note on General aspects of the mechanism of action Amphetamine.
- (2) Write a note on Phase I metabolism reactions.
- (3) How Oncogenes are activated ?
- (4) Write a note on Organic Carcinogen which has the potential to cause cancer.
- (5) Classified poison according to the mode of action.
- (6) What is the pathophysiology of carbon monoxide poisoning ?

(c) Answer in detail : (Any 2) **2×5=10**

- (1) Write a note on Therapeutic drug monitoring of anti-inflammatory drugs.
- (2) Write a note on Opiates.
- (3) Write a note on gas chromatography.
- (4) Write a note on Alcohol Poisoning.
- (5) Write a note on General or first aid treatment in toxicology.