



HCM-003-001547 Seat No. _____

B. Sc. (Forensic Science) (Sem. V) (CBCS) Examination

October - 2017

FS - 502 : Forensic Chemistry

Faculty Code : 003

Subject Code : 001547

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

[Total Marks : 70

- Instructions :** (1) This question paper contains three questions. All are compulsory.
- (2) Draw neat and labelled diagrams wherever necessary.
- (3) Figures to the right indicate marks.

1 Answer the following questions : **20**

- (1) Which dye is used to color motor gasoline ?
- (2) Full name of THC which relates to cannabis resin?
- (3) Full form of BIS.
- (4) The smoke point of typical standard kerosene is _____ .
- (5) Suicidal Toxicology is a sub-discipline of Toxicology. Is it true or false?
- (6) What is the value of Research Octane number of motor spirit?
- (7) _____ is used as fluxing agent in manufacture of cement.
- (8) Density of typical standard kerosene at 15°C is _____.
- (9) Give the example of cerebral poison.
- (10) Which chromatography techniques are used in the analysis of poison?

- (11) From following, which section 284, 299, 304A, 324 and 328 of I.P.C. deals with offence relating to administration of poisonous substances?
- (12) _____ added during manufacturing of cement to regulate setting time.
- (13) Which biological evidence that may be found at the crime scene?
- (14) Who is the father of toxicology?
- (15) Different methods for the administration of poison?
- (16) Which physical evidence can be used for analysis to determine the level of intoxication in drink driving cases?
- (17) The center for research of Jaggery - TIDE is located in which city of India?
- (18) Which preservative is added with any biological evidence during its preservation in glass bottles to avoid the fungal growth that may happen in plastic bottles?
- (19) List out the factors affecting the action of poison.
- (20) What is median lethal dose?

2 Give the answer of following questions as per instruction :

(A) Write any **three** out of six : **6**

- (1) Give the example of irritant poison.
- (2) What is the difference between chronic and acute poisoning?
- (3) Define LD₅₀ and LC₅₀.
- (4) Define fire and arson.
- (5) Give the example of gaseous poison.
- (6) Which products includes in petroleum product ?

(B) Write any **three** out of six : **9**

- (1) Describe the distillation of petrol.
- (2) Describe TLC for detection of Phenolphthalein.
- (3) Write the uses of Jaggery.
- (4) Scope of forensic chemistry.

- (5) In TLC, which visualizing reagents can be used for detection of adulteration in petrol?
- (6) Types of fiber.

(C) Write any **two** out of five : **10**

- (1) Write the classification of poisons.
- (2) Describe fire, fire triangle and write a note on chemistry of fire.
- (3) List out the types of cases and exhibits which come under the forensic chemistry division.
- (4) List out the instrumental methods used in forensic chemistry.
- (5) Classification of fiber.

3 Give the answer of following questions as per instruction :

(A) Write any **three** out of six : **6**

- (1) Test for the analysis of drinking alcohol.
- (2) Example of organic poisons.
- (3) Differentiate - Narcotic Drugs and Psychotropic Substances.
- (4) What are aniline point and pour, which relates to distillation of petroleum product?
- (5) Differentiate between Toxicant and Toxin.
- (6) In TLC, which mobile phases can be used for detection of Phenolphthalein ?

(B) Write any **three** out of six : **9**

- (1) Write a note on main components of paint.
- (2) Enlist all the tests done for Methyl Alcohol and write about any one qualitative test in detail.
- (3) UV-Spectroscopy for analysis of color generating content in petrol.
- (4) Enlist all the tests used for testing Jaggery. Describe any one in detail.
- (5) Write the extraction procedure of poisons.
- (6) Arson crime scene management.

(C) Write any **two** out of five : **10**

- (1) Characteristics of standard kerosene and write a note on distillation of kerosene.
 - (2) Write a short note on separation methods used in forensic chemistry.
 - (3) Describe bribe trap cases and forensic examination of phenolphthalein.
 - (4) Describe instruments used in analysis of evidences in forensic chemistry lab.
 - (5) Give the classification of poison.
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