



MAK-003-001547-N Seat No. _____

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

October / November – 2016

FS - 502 : Forensic Chemistry

Faculty Code : 003

Subject Code : 001547-N

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

[Total Marks : 70

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

1 Answer shortly : 20

- (1) Petroleum product include _____.
- (2) Which drug does not have any withdrawal effects?
- (3) Which component of Opium gives Analgesic effect?
- (4) Hidden home-made factories are engaged in the manufacturing of which drug?
- (5) Gangrene is overdose effect of....
- (6) Diesel consist essentially of _____ hydrocarbons.
- (7) Kerosene normally boils in range of _____ °C.
- (8) Eating Jaggery (single or with any other food) may prevent happening of which diseases in our body ?
- (9) Dille - Koppanyi Test is used for analysis of which drug?
- (10) What is used to PDS kerosene?
- (11) Motor gasoline consists essentially of _____ hydrocarbons.
- (12) Phenobarbital falls in which category of Barbiturates?
- (13) Oil orange dye of petrol give the value of λ max in UV spectroscopy is _____.

- (14) Which drug is a first choice for treatment of Anxiety?
- (15) Kerosene consists essentially of _____ hydrocarbons.
- (16) The drug after which taken, it increases the smell and hearing.
- (17) Which is a product of destructive distillation of wood from which poisons?
- (18) Which solvent system is used for the TLC of petrol
- (19) During the color test with FPN reagent we observe Violet Color, which may be the probable poison?
- (20) What is the carbamate ?

2 Give the answers of following questions as per instruction :

(a) Write any **three** out of six . **6**

- (1) Scopes of forensic chemistry.
- (2) Write about binder which is the main component of paint ?
- (3) What is toxicology ?
- (4) Name the chemicals used in anti-corruption cases.
- (5) Mention the types of fire.
- (6) Define smoke point and give the value of smoke point of kerosene.

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

- (1) Thin layer chromatography of petrol for the analysis of adulteration
- (2) Classification of fiber.
- (3) How will you perform qualitative analysis of Furfural ?
- (4) Enlist the sub disciplines of Toxicology.
- (5) What are the operating conditions of Gas Chromatography of Methanol ?
- (6) Enlist the fluids collected as physical evidence during crime scene of death.

- (c) Write any **two** out of five : **10**
- (1) Write a note on main components of paint.
 - (2) Write the significance of forensic toxicological examination.
 - (3) Analyze Volatile Poison – Chloroform (CHCl_3)
 - (4) Arson crime scene management.
 - (5) Write a note on toxic sample collection and preservation technique of the evidences collected from crime scene and sent to the FSL.
- 3** Give the answers of following questions as per instruction :
- (a) Write any **three** out of six. **6**
- (1) What is Threshold dose ? Enlist the fluids collected as physical evidence during crime scene of death.
 - (2) Give any 2-3 names of the gaseous poisons.
 - (3) Explain analysis of Chloroform.
 - (4) Preparation of Rhodamine spray reagent for TLC of petrol and kerosene.
 - (5) Define flash point and Aniline point.
 - (6) Name the research centers researching on Jaggery to enhance the productivity of the process.
- (b) Write any **three** out of six : **9**
- (1) Thin layer chromatography of kerosene for the analysis of adulteration.
 - (2) Properties of cement compounds.
 - (3) Thin layer chromatography of petrol for the analysis of adulteration.
 - (4) Types of heat transfer.
 - (5) Why blood sample is choice for detection of poison ?
 - (6) What are the properties of CHCl_3 ?

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

- (1) Write a note on chemistry of fire.
 - (2) Forensic analysis of paint sample.
 - (3) Write a note on distillation of petrol.
 - (4) Analyze Barbiturate poisons.
 - (5) How to extract Cocaine Hydrochloride from Dry Powder of Coca Leaf ?
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