

**PARUL UNIVERSITY**  
**PARUL INSTITUTE OF APPLIED SCIENCES**  
**MID SEMESTER INTERNAL EXAMINATION, 2019.**  
**B. Sc. Semester IV**

**Subject: Forensic Chemistry**

**Paper Code: 11107251**

**Time: 9:30-11:00**

**Date: 25/02/2019**

**Maximum Marks: 40**

**Instructions:**

- 1. All questions are compulsory, and options are given in first and second question only.**
  - 2. Numbers to the right of question indicate the marks of respective question.**
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**Q. 1** Attempt any **one** question of the following. **(08)**

- (i) Write a note on Pesticides.
- (ii) Explain Chemistry of Fire in details.

**Q. 2** Attempt any **three** questions of the following. **(12)**

- (i) Write a note on searching of fire scene.
- (ii) Write a brief on types of fire.
- (iii) Write a note on forensic examination of ink.
- (iv) What is combustion? Write a brief on it.
- (v) What is backdraft and flash over point? Explain it.

**Q. 3** Do as directed. Attempt all five questions. **(05)**

- (i) Define Ignition temperature.
- (ii) What is Heat of Combustion?
- (iii) Give one example of Oxidation reaction.
- (iv) What is Pyrolysis?
- (v) Which instrument is used for detection of flammable liquid at crime scene?

**Q. 4** Write correct option in your answer sheet for following 15 multiple choice questions. **(15)**

MCQ 1 Which is not making the fire triangle?

- |            |          |
|------------|----------|
| (A) Oxygen | (B) Heat |
| (C) Fuel   | (D) Fire |

MCQ 2 After Mixing with oxygen, substance produces\_\_\_\_\_.

- |                 |                      |
|-----------------|----------------------|
| (A) Heat Energy | (B) Fire             |
| (C) Smoke       | (D) All of the above |

MCQ 3 The minimum temperature at which a liquid gives off vapors known as\_\_\_\_\_.

- |                 |                    |
|-----------------|--------------------|
| (A) Flash point | (B) Ignition point |
| (C) Vapor Point | (D) Boiling point  |

MCQ 4 The transfer of heat from one object to another through direct physical contact known as\_\_\_\_\_.

- |                |                |
|----------------|----------------|
| (A) Radiation  | (B) Conduction |
| (C) Combustion | (D) Convection |

- MCQ 5 Liquids having a flash point below \_\_\_\_\_ is known as flammable liquids.  
 (A) 100 °F (B) 140°C  
 (C) 110°F (D) 100 °C
- MCQ 6 Following which is not the phase of fire?  
 (A) Incipient (B) Free burning  
 (C) Smoldering (D) Pyrolysis
- MCQ 7 Which method is used to analyze complex mixture of volatile organic compound?  
 (A) Gas chromatography (B) Thin layer chromatography  
 (C) Gel Chromatography (D) High Performance Liquid Chromatography
- MCQ 8 In which Method Carbon fiber mat is used to collect samples?  
 (A) Heated headspace sampling (B) Passive headspace diffusion  
 (C) Both (a) and (b) (D) None of the above
- MCQ 9 In solid phase microextraction carbon fibre mat is replaced by\_\_\_\_\_  
 (A) Syringe (B) solid-phase absorbent bonded to the fiber  
 (C) Silicon Mat (D) None of these.
- MCQ 10 The transfer of heat by some circulating medium known as\_\_\_\_\_  
 (A) Radiation (B) convection  
 (C) Conduction (D) Smoldering
- MCQ 11 Following which is the organochlorine?  
 (A) Lindane (B) Aldrin  
 (C) DDT (D) All of the above
- MCQ 12 Which is the most widely used insecticide in India?  
 (A) Organochlorine (B) Organophosphorus  
 (C) Carbamates (D) All of the above
- MCQ 13 Carbamates shows mode of action at by affecting \_\_\_\_\_  
 (A) Na- K channel (B) Lymphatic system  
 (C) Acetylcholinesterase (D) None of the above inhibition
- MCQ 14 Usually the cause of death due to pesticide poisoning is\_\_\_\_\_  
 (A) Homicidal (B) Suicidal  
 (C) Accidental (D) Both (b) and (d)
- MCQ 15 \_\_\_\_\_ have always been extremely popular to committing suicide in India.  
 (A) Organophosphates (B) Carbamates  
 (C) Both of the above (D) None of the above.

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