

M.Sc. (Sem.-II) Examination
407

Forensic Science

May-2017

Time : 3 Hours]

[Max. Marks : 70

Instructions: Figures to the right indicate full marks

SECTION- I

(1 marks each)

Answer the following:

1. Draw the full Henry classification.

20	9	10	M	4
\	\	\	W	\
15	7	14	M	12
/	/	/	W	/

2. Draw the full Henry classification.

12		10	M	5
\	A	\	W	\
12	9	12	I	6
/	/	/	W	/

3. Draw the only primary classification

Missing	9	10	11	12
	\	\	\	\
Missing	11	12	13	14
	/	/	/	/

4. Whorls are known as patterns. (valued/unvalued)
 5. Pattern with no ridge count can be considered as loop? (Yes or No) Give reason.
 6. Central pocket loop is a part oftype pattern.
 7. The elevated portion of friction skin is not a fingerprint (True or False)
 8. The study of pores in finger print is known as
 9. Pattern without fixed points is known as.....
 10. Name two Indian Police personals who contributed in 10 digit Henry's classification adapted worldwide.

SECTION-II

(5 marks each)

Answer any six of the following:

- Describe "Identification of Prisoners Act 1920".
- Explain why rolled and plain prints are taken in the fingerprint slips.
- What is the probability of 3 loops?
- What are ridges and creases? What purpose they serve in human life?
- Write down the fundamental principles of fingerprint science and definition of "pattern".
- Explain hairy lines and Hiatus in finger impressions.
- Describe ridge counting and ridge tracing procedures in detail.
- Write conditions for a pattern to be: (a) inner and outer whorls (b) Tented Arch
- Write the chronological procedure follow to compare two fingerprints.
- Write short note on (a) Gradational pattern (b) Chance print.

(P.T.O...)

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SECTION III

Q.1. Explain fingerprint classification formula of Sir E. R. Henry in detail.
(15 marks)

OR

Q.1. Explain the usefulness of Automated Fingerprint Identification System and its coordination with Police.
(15 marks)

Q.2. Explain the powdering and chemical method used to chance prints at the scene of crime.

OR

Q.2. (a) Explain the procedure of identification, collection and preservation of fingerprints on scene of crime.
(10marks)

(b) Describe the method in detail to develop printed from wet surface.
(5marks)

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Candidate's Seat No : _____

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SECTION- I

(1 marks each)

Answer the following:

- (1) What is Line quality in writing?
- (2) Signatures obtained in routine course of business are known as
- (3) Why natural variation in writings is important?
- (4) Give principle for indented writing examination.
- (5) One rupee Indian Note is issued by.....
- (6) Study of coins is known as
- (7) Give writing characteristics observed in finger movement of writing.
- (8) What is Style of writing?
- (9) What are signs of forgery?
- (10) Give writing characteristics due to emphasis on nib point.

SECTION-II

(5 marks each)

Answer **any six** of the following:

- (1) Write short note on : (a) Substitution (b) Alteration (c) Obliteration
- (2) Describe in detail the Principles of Handwriting and Principles of handwriting identification.
- (3) Explain in detail the importance of contemporary natural and specimen signatures in disputed signature examination.
- (4) Describe various types of forgeries in photocopies.
- (5) Describe forensic ink analysis in detail.
- (6) What is questioned documents? Describe questions raised on the authenticity of documents with examples?
- (7) What is scanned forgery? Describe process of examination in it.
- (8) Describe functioning of different types of printers.
- (9) Explain OVI ink, Micro printing and optical fiber in currency Notes.
- (10) Describe procedure for collection of standards in hand writing comparison.

(P.T.O)

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SECTION-III

1. (a) Explain computer printout comparison and identification. (10 Marks)
- (b) Give different types of erasure methods used in forgeries and explain detection methods. (5Marks)

OR

1. Explain in detail various types of document forgeries and also their examination methods. (15 Marks)
2. (a) Describe ESDA and procedure of indented writing revealing. (10 Marks)
- (b) Describe procedure for care and handling in collection and examination of questioned documents. (5Marks)

OR

2. Describe security features of new 2000 Indian currency note. (15 Marks)

Instructions: Figures to the right indicate full marks**SECTION- I****(1 marks each)**

1. What is ANFO?
2. Lattha poisoning happens due to presence of
3. At what temperature density of petroleum product is checked?
4. What is API formula for petroleum products?
5. What are aerosol explosive mixtures?
6. Give an example of primary explosives.
7. What are carbamates?
8. Under which section of IPC the dowry death is stated?
9. Mention the stages which arsonist tries to achieve in malicious fire.
10. Name the dye used in kerosene.

SECTION-II**(5 marks each)****Answer any six of the following:**

1. Give classification of alcohols.
2. Write note on analysis of petroleum products.
3. What are common characteristics of explosive substances?
4. Differentiate between primary and secondary explosives.
5. Give classification of pesticides?
6. Write note on Deflagration and Detonation.
7. What are pyrotechnique compositions?
8. Describe forensic analysis of petrol, diesel and kerosene.
9. Write the forensic significance and postmortem appearance in methanol poisoning.
10. Write a note on nature and progress of fire in Arson cases.

SECTION-III

1(a). Explain "Train of Explosive" in detail with diagrams. (7 Marks)

(b) Differentiate between Non Explosive explosions and Explosive explosions. (8 Marks)

OR

1. Describe crime scene management in detail in Arson cases. (15 Marks)

2. What are Improvised Explosive devices? Describe them on the basis of initiating devices. (15 Marks)

OR

2. Describe principle and instrumentation of various types of breath analyzer. (15 Marks)

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SECTION- I

(1 marks each)

1. Name the factors affecting the method of extraction of a poison.
2. Why is the efficiency of extraction higher in MARS than in ordinary solvent extraction?
3. In routine cases of poisoning, the viscera for chemical examination are preserved in which of the following?
 - A. Formalin
 - B. Rectified spirit
 - C. Saturated solution of common salt
 - D. None of the above
4. Food poisoning occurs with the ingestion of the following:
 - A. Salmonella group bacteria
 - B. Mycobacterium group bacteria
 - C. Cyanobacteria group bacteria
 - D. None
5. Which of the following pre-hospital measures are acceptable in case of snake bite?
 - A. Application of splint to the affected part
 - B. Incision and application of the suction to the affected part
 - C. Application of ice
 - D. None of the above
6. What is absorption of drug?
7. What is bioavailability?
8. Name two viper snakes found in India.
9. Write botanical name of Dhatura.
10. Write active principles of Cannabis.

SECTION-II

(5 marks each)

Answer any six of the following:

1. Discuss the Fresenius method for the extraction of mercury.
2. Explain 'Dry Ashing' method.
3. Write notes on classification of poisons.
4. Define the following schedules and what they are meant for?
(i) Schedule A (ii) Schedule B (iii) Schedule C (iv) Schedule H and (v) Schedule Y?
5. Describe Plasma protein binding of drugs? How it effect the toxicity of the drug?
6. Enumerate factors affecting drug metabolism and explain any two in detail.
7. Explain the elimination routes of drugs?
8. Write a note on Cannabis poisoning.
9. Give sign and symptoms in case of Arsenic poisoning.
10. Write sign and symptoms, PM appearances and medicolegal aspects of strychnine poisoning.

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SECTION-III

- 1 (a). Write a note on solid phase extraction. (5 Marks)
(b). Write note on Ricin poisoning. (5 Marks)
(c). Give forensic aspects of lead poisoning with analytical procedures. (5 Marks)

OR

- 1 (a). Which are the route of drug administration? Explain each parenteral route in detail. (5 Marks)
(b). Describe poisoning due to opium in detail, along with its medicolegal aspects. (10Marks)
- 2 (a). Explain the tests used for the identification of arsenic. (5Marks)
(b). Define the following terms meant for?LD50, ED 50, Therapeutic index, Threshold Value, Sigmoid curve, Pharmacokinetics, Pharmacodynamics (10 marks)

OR

- 2 (a). Write a note on micellar extraction. (5 Marks)
(b). Write detail note on elapid and viper snakes. Also give their medicolegal aspect. (10 Marks)
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