

**PARUL UNIVERSITY**  
**PARUL INSTITUTE OF APPLIED SCIENCES**  
**MID SEMESTER INTERNAL EXAMINATION, SEPTEMBER 2018**  
**M. Sc. Semester I**  
**Subject: Forensic Science**

**Paper Code: 11207104**

**Title of the paper: Forensic Dermatoglyphics and other impressions**

**Date: 07/09/2018**

**Time: 11:30 AM to 1:00 PM**

**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) What is Latent print? Discuss on conventional and chemical techniques for finger impression enhancement.
- (ii) Write a note on Hennerly's ten-digit classification.

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

- (i) Identify each fingerprint based on its classification.



- (ii) How many types of fingerprints patterns normally classified in the study of dermatoglyphics? Brief it.
- (iii) What are impression evidences? Give the details on types of fingerprints.
- (iv) Write on fingerprint lifting methods from dead body.
- (v) Brief on history and development of Fingerprint science in India.

- Q. 3** Do as directed. Attempt all five questions. **(05)**
- (i) Who is Father of Fingerprint?
  - (ii) What are the fundamental principles of Fingerprint?
  - (iii) Write the composition of Latent print.
  - (iv) What is the composition of chromatic powder?
  - (v) What is the full form of AFIS?

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

- 1 Latent Fingerprint on the cloth can be developed by:
- (A) Finger print powder
  - (B) Iodine fuming method
  - (C) AgNO<sub>3</sub> method
  - (D) All the above methods
- 2 The commonest type of Finger print in India is:
- (A) Whorl
  - (B) Radial Loop
  - (C) Tented arch
  - (D) Ulnar loop
- 3 Arrange the following parameters in a sequential order for fingerprint examination:
- i) Ridge tracing
  - ii) Core type
  - iii) Ridge counting
  - iv) Circle reading
- (A) i), ii), iii), iv)
  - (B) ii), iii), i), iv)
  - (C) iv), ii), iii), i)
  - (D) iii), ii), iv), i)
- 4 Which group of ancient people were the first to use fingerprints for personal identification?
- (A) The Greeks
  - (B) The Sumerians
  - (C) The Chinese
  - (D) The Romans
- 5 What is the main system used by the FBI and other organizations today to find a match to a latent fingerprint?
- (A) AFIS
  - (B) LPIS
  - (C) FIS
  - (D) CATFISH
- 6 Which one of these is NOT a type of fingerprint found at the scene of the crime?
- (A) Plastic
  - (B) Visible
  - (C) Composite
  - (D) Latent
- 7 Which of these is a name given to the examination of fingerprints?
- (A) Trichology
  - (B) Entomology
  - (C) Dactyloscopy
  - (D) Palynology

- 8 Which of the following statements about fingerprints is NOT true?
- (A) Fingerprints are no more similar between two family members than between two strangers. (B) Even identical twins do not have identical fingerprints.
- (C) Fingerprints are unique for every human being. (D) Fingerprint patterns do not change with growth or age.
- 9 The most common form of developing latent prints.
- (A) Dusting (B) Silver nitrate  
(C) Photography (D) Black light
- 10 Which statement best describes the ridges in whorl?
- (A) The ridges in the core enter and exit the same side of the finger (B) The ridges in the core enter and exit opposite sides of the finger  
(C) Ridges in the core form a circle (D) None of above
- 11 What item is not considered a porous surface?
- (A) Paper (B) Cloth  
(C) Cardboard (D) Tile
- 12 Which chemical treatment produces a white – appearing latent print?
- (A) Super glue fuming (B) Physical developer  
(C) Iodine fuming (D) Silver nitrate
- 13 If an imaginary line drawn between the two deltas of a whorl pattern touches any of the spiral ridges, the pattern is classified as a:
- (A) Central pocket whorl (B) Plain Whorl  
(C) Double loop (D) Lateral pocket whorl
- 14 Latent impressions are made up of-
- (A) 98% water and 2% amino acid (B) 100% water  
(C) 98% amino acid and 2% water (D) 100% amino acid
- 15 Iodine fumes react with oil and fatty acids to produce-
- (A) Yellow-brown reaction product (B) Red-brown reaction product  
(C) Purple-brown reaction product (D) Blue-brown reaction products

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