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End Semester Examination, December 2024
M.Sc. Forensic Science– 1st Semester
DERMATOGLYPHICS AND IMPRESSIONS (MSFS709)

Time: 2.5 hrs.

Max Marks: **50**

Note: *All Questions are compulsory. Marks are indicated against each question.*

PART-A

- Q.1 Answer the following questions: (Any five out of seven) $2 \times 5 = 10$
- a) Describe the primary characteristics that define fingerprint patterns. [CO-1] [L-2]
 - b) What is ridge counting, and why is it significant in fingerprint analysis? [CO-1] [L-3]
 - c) Define poroscopy and its role in forensic investigations. [CO-3] [L-2]
 - d) Explain how latent fingerprints differ from visible fingerprints. [CO-4] [L-2]
 - e) List the three main classification systems for fingerprints. [CO-2] [L-3]
 - f) What are the main factors that impact the preservation of fingerprint evidence? [CO-4] [L-2]
 - g) Briefly explain the concept of edgeoscopy and its application. [CO-3] [L-1]

PART-B

- Q.2 Discuss the applications of dermatoglyphics in forensic and medical research. Why is dermatoglyphics significant in personal identification? [CO-2] [L-3] 10

OR

Describe how dermatoglyphics assists in solving real-world forensic issues. Give examples to illustrate its use in investigations [CO-2] [L-2] 10

- Q.3 Describe how poroscopy and edgeoscopy are applied in forensic investigations. Provide examples to illustrate their significance. [CO-3] [L- 2] 10

OR

How are fingerprints classified on the basis of ridge characteristics? Explain with examples. [CO-3] [L- 2] 10

Q.4 Analyze the methods used to collect and preserve latent fingerprints from different surfaces.

Include chemical and physical techniques.

[CO-4] [L- 4] 10

OR

Describe the procedure for developing fingerprints using digital imaging techniques and explain its advantages.

[CO- 4] [L-2] 10

Q.5 Evaluate the role of ridge patterns and minutiae points in forensic analysis. Why are these features crucial for personal identification?

[CO-5] [L-5] 10

OR

Discuss the challenges faced in identifying individuals based on fingerprint analysis at crime scenes.

[CO-5] [L-4] 10