

D 121262**(Pages : 2)****Name.....****Reg. No.....****FOURTH SEMESTER M.Sc. DEGREE (REGULAR/SUPPLEMENTARY)
EXAMINATION, APRIL 2025****(CBCSS)****Forensic Science****FSC4E27—MODERN TRENDS IN FINGERPRINT SCIENCE****(2020 Admission onwards)****Time : Three Hours****Maximum : 30 Weightage****Section A***Answer any **four** questions.*

1. What do you mean by Poroscopy ?
2. Give the method of development of fingerprint from human skin.
3. Give the chemistry and mechanism of Sudan Black in Fingerprint development.
4. Elucidate on the use of Cadmium Nanoparticles.
5. What is the nature of chemical imaging of fingerprints ?
6. What are minutiae feature extraction ?
7. Write about the ten-print to ten-print AFIS search.

(4 × 2 = 8 weightage)**Section B***Answer any **four** questions.*

8. Write a brief on the composition of sweat.
9. Explain the Cyanoacrylate ester method.
10. Write a short note on the vacuum deposition method.
11. How are blood-stained prints developed and lifted from a crime scene ?

Turn over

12. What is the method of lifting fingerprints from the barrel of a Firearm ?
13. Describe the important attributes of Photo-Luminescent nanoparticles.
14. Write about the minutiae features extraction in AFIS.

(4 × 3 = 12 weightage)

Section C

*Answer any **two** questions.*

15. Write a short note on the anatomy of skin. How does it give the biological basis of fingerprints ?
16. What are the ninhydrin analogues used for fingerprint development ? Give their mechanism.
17. Write a note on the radioactive *e* techniques used in fingerprint recording.
18. Describe the procedure of 10 print to latent and latent to latent AFIS search.

(2 × 5 = 10 weightage)