

QP CODE: 25021113

Reg No	:	
Name	:	

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE / MERCY CHANCE EXAMINATIONS, FEBRUARY 2025

Sixth Semester

B.Sc Cyber Forensic Model III

CHOICE BASED CORE COURSE - CF6CBT04 - DIGITAL IMAGE PROCESSING

2017 Admission Onwards

2BE1A8C2

Time: 3 Hours

Max. Marks: 80

Part A

Answer any **ten** questions. Each question carries **2** marks.

- 1. What do you meant by shrinking of digital images?
- 2. What is a pixel?
- 3. What is meant by colour model?
- 4. Define negative transformations.
- 5. What is blurring?
- 6. Define image smoothing.
- 7. Construct the 2D fourier transform and its inverse.
- 8. Why the restoration is called as unconstrained restoration?
- 9. Write the expression for Impulse noise.
- 10. Define compression ratio.
- 11. What are the operations performed by error free compression?
- 12. What are the basic steps used in JPEG?

(10×2=20)

Part B

Answer any **six** questions. Each question carries **5** marks.

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- 13. Distinguish between digital image, and binary image.
- 14. Explain spatial domain enhancement methods.
- 15. Explain histogram processing.
- 16. Explain the different transforms in DIP and explain any one in detail.
- 17. Compare smoothing & sharpening in frequency domain.
- 18. Draw the model of image degradation process.
- 19. Distinguish between different thresholding operation used in image segmentation.
- 20. What are the operations performed by error free compression?
- 21. Explain the lossless compression coding.

(6×5=30)

Part C

Answer any **two** questions. Each question carries **15** marks.

- 22. What are the elements of image processing system? Describe its working.
- 23. Discuss about the mechanics of filtering in spatial domain.
- 24. Discuss fourier transform.
- 25. Explain segmentation.

(2×15=30)