Turn Over

04004005



QP CODE: 24001325

Name :

B.Sc/BCA DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, MARCH 2024

Sixth Semester

CHOICE BASED CORE COURSE - CS6CBT01 - DIGITAL IMAGE PROCESSING

Common for B.Sc Information Technology Model III, B.Sc Computer Science Model III, B.Sc Computer Applications Model III Triple Main & Bachelor of Computer Applications

2017 Admission Onwards

5A704623

Time: 3 Hours

Part A

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

- 1. Write short note on grey level image.
- 2. What is the storage requirement for a 1024*1024 binary image.
- 3. Distinguish between image enhancement and restoration.
- 4. Describe feature selection in image processing.
- 5. Describe DPI.
- 6. What is N4(P) and ND(P)?
- 7. Describe any two operations in set theory.
- 8. Describe image enhancement in spatial domain.
- 9. What is gamma correction?
- 10. Define dilation.
- 11. What is the use of image segmentation?
- 12. Describe region splitting in image segmentation?

(10×2=20)

Part B

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

13. Elaborate on any two application areas that use digital image processing.



Max. Marks : 80



- 14. Explain optical illusion.
- 15. Explain the two processes that are used to convert the continuous sensed data into digital form.
- 16. What is image negative? Write short note on its applications.
- 17. Explain with diagram the four basic image histograms.
- 18. Explain in detail Fourier Transform in frequency domain.
- Opening and closing are duals with respect to set complementation and reflection. Elaborate on your view.
- 20. How can we perform basic edge detection using gradient operators?
- 21. Describe basic global thresholding.

(6×5=30)

Part C

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

- 22. What is the goal of digital image processing? Explain the basic components of digital image processing.
- 23. Explain the basic operations of correlation and convolution using image filters.
- 24. Explain hit-or-miss transformation.
- 25. A) Explain the concept of region growing with suitable example. B) Specify application of region growing.

(2×15=30)