

Q. P. Code: 27385

Duration 3 Hours

Maximum marks 80

- 1) Question 1 is compulsory
- 2) Solve any **three** from the remaining five questions
- 3) Assume suitable data if necessary.
- 4) Figures to the right indicate full marks

- Q.1. Answer any **four questions** from the following: [20]
- a. Differentiate between DCT based and Wavelet based compression standards.
 - b. Define pattern and pattern classes.
 - c. Discuss different generations of CT machines.
 - d. Give the characteristics of Multi Spectral Scanning System (MSS).
 - e. State Fourier Slice Theorem.
- Q.2.a With the help of a neat block diagram, explain JPEG 2000 compression scheme. [10]
- b. Discuss different spectral factors involved in remote sensing. [10]
- Q.3.a What is minimum distance classifier? [10]
- b. Name and explain any two noise probability density functions. [10]
- Q.4.a Differentiate in detail between inverse filter and Wiener filter. [10]
- b. Explain the importance of Image Registration in Image Fusion. [10]
- Q.5.a How can data be hidden in a digital image? Explain any one method in detail. [10]
- b. What is image reconstruction? Explain the method of image reconstruction using parallel beam filter back projections. [10]
- Q.6 Write short notes on **any four**: [20]
- a. Spectral Signatures
 - b. Radon transform
 - c. Video compression standards
 - d. Push broom scanner
 - e. Wavelet transform
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