

Q.P. Code : 30261

(3 Hours)

[Total Marks : 80]

Instructions : 1. Answer any four questions.
2. Figures to the right indicate maximum marks.

Q1. Answer the following:

- Name different types of EEG signals with their corresponding frequency ranges. [05]
- What is Radon transform? What is its significance in image reconstruction? [05]
- Compare and contrast digital signal processors and general purpose microprocessors. [05]
- Explain in brief different generations of CT machines [05]

Q2.

- How are different stochastic models of digital image classified? Explain each class in detail. [10]
- Explain VLIW architecture in detail. How does it help to optimize the performance of DSPs? [10]

Q3.

- With the help of a neat block diagram, explain the working of JPEG 2000 standard. [10]
- Explain in detail any one algorithm to detect QRS wave in ECG. [10]

Q4.

- With the help of a neat block diagram, explain how DSP is used in RADAR signal processing. [10]
- What is the limitation of Fourier transform in analyzing speech signals? How is it eliminated in STFT? [10]

Q5.

- What are DTMF signals? Explain a procedure for decoding DTMF signals. [10]
- What are the various features in mammogram? Explain Image Processing steps involved in extracting those features. [10]

Q6. Write short notes on any **four** of the following: [20]

- Fourier Slice Theorem
- Finger print recognition
- LMS algorithm
- Neural network classifiers
- Feature vectors