2 3 7 3

Advanced Digital Image Processing
(1080)

P. Pages : 1

Time : Three Hours   **Max. Marks : 100**

Instructions to Candidates :
1. Do not write anything on question paper except Seat No.
2. Answersheet should be written with blue ink only. Graph or diagram should be drawn with the same pen being used for writing paper or black HB pencil.
3. Students should note, no supplement will be provided.
4. Solve **any five** questions from 1 to 8.
5. Draw suitable diagrams wherever necessary.
6. Assume suitable data if necessary.
7. Figure to right indicates full marks

1.	a)	Explain the image model in detail.	**10**
	b)	Explain the sampling and quantization of an image.	**10**
2.	a)	Explain the properties of 2D Fourier Transform.	**10**
	b)	Enlist the different Separable Image transform. Explain any one in detail.	**10**
3.	a)	Explain the Histogram modification techniques.	**10**
	b)	Explain the Spatial Domain Method.	**10**
4.	a)	Explain the Run Length Encoding.	**10**
	b)	Explain the lossy and lossless compression.	**10**
5.	a)	Explain the principle of following region based segmentation procedures.	**10**
		i) Region growing.	
		ii) Region splitting.	
		iii) Split and merge.	
	b)	Enlist and explain the techniques used for the detection of digital image.	**10**
6.	a)	Explain the use of neural networks in pattern recognition.	**10**
	b)	Explain the decision theoretic methods for the pattern recognition.	**10**
7.	a)	Define Hadamard transform used for the transformation of an Image.	**10**
	b)	Explain the Gray Level Interpolation.	**10**
8.	a)	Explain the different schemes for the representation of digital image.	**10**
	b)	Explain the different image standards.	**10**

****