



Advanced Digital Image Processing (1080)

P. Pages : 2

Time : Three Hours

Max. Marks : 100

Instructions to Candidates :

1. Do not write anything on question paper except Seat No.
2. Answer sheet 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. Figures to right indicates full marks.

1. a) How to present the digital image ? Explain in detail. **10**
b) Explain camera model with the help of a neat circuit diagram. **10**
2. a) Explain the properties of Discrete Cosine Transform. **10**
b) Enlist the different separable image transform. Explain any one in detail. **10**
3. a) Explain the Frequency Domain Method. **10**
b) Explain the degradation model of image restoration. **10**
4. a) Explain the fidelity criteria. Also explain coding redundancy. **10**
b) Explain the lossy and lossless compression. **10**
5. a) Explain the measures of textures. Also explain the statistical models for textures. **10**
b) Explain the basic formulation and Region Growing related with Region based segmentation. **10**

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| 6. | a) | Explain the use of neural networks in pattern recognition. | 10 |
| | b) | Discuss in detail syntactical recognition of strings. | 10 |
| 7. | a) | Write a short note on Wavelet transform. | 10 |
| | b) | Explain the Histogram modification techniques. | |
| 8. | a) | Explain the different schemes for the representation of digital image. | 10 |
| | b) | Explain the different image file formats. | 10 |
