Time: 3 hours

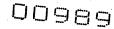
BICS-024

Maximum Marks: 70

B.Tech. - VIEP - COMPUTER SCIENCE AND ENGINEERING (BTCSVI)

Term-End Examination

June, 2015



P.T.O.

BICS-024 : DIGITAL IMAGE PROCESSING

| | | empt any seven questions. All questions carry al marks. | | |
|----|-----|---|----|--|
| 1. | (a) | Draw the block diagram of Digital Image Processing. | 5 | |
| | (b) | Enumerate the main features of mean filter. | 5 | |
| 2. | (a) | Explain with the help of an example the concept of sampling and quantization. | 5 | |
| | (b) | Explain the Homomorphic filter. | 5 | |
| 3. | | is Image Restoration? Draw and explain asic block diagram of the restoration process. | 10 | |
| 4. | | is morphology? Explain in detail the ving two basic morphology algorithms: | 10 | |
| | (a) | Region Filling | í | |
| | (b) | Convex Hull | | |

| | (b) | Stereo Imaging | |
|-----------|--|---|----|
| 6. | - | ain the thresholding approach of segmenting image. | 10 |
| 7. | expla | ain the term Image Segmentation. Also ain the segmentation based on discontinuities segmentation based on similarities. | 10 |
| 8. | What do you mean by colour space? Classify them and describe the CMY colour model. | | |
| 9. | (a) | Compare and contrast the smoothing and sharpening filters. | 5 |
| | (b) | What do you mean by unsharp and crisping? Explain with suitable diagram. | 5 |
| 10. | Explain any two of the following: $2\times 5=10$ | | |
| | (a) | Region Extraction | |
| | | | |
| | (b) | Gaussian High Pass Filters | |

Explain the following in detail:

Geometric Transformation

5.

(a)

10