

Printed Pages : 2



EBM-701

(Following Paper ID and Roll No. to be filled in your Answer Book)

**PAPER ID : 101704**

Roll No.

|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|--|--|

**B. Tech.**

(SEM. VII) (ODD SEM.) THEORY

EXAMINATION, 2014-15

**BIOMEDICAL IMAGE PROCESSING**

Time : 3 Hours]

[Total Marks : 100

- 1 (a) Explain light, luminance, brightness and contrast. 10  
Discuss Mach band effect.
- (b) State and prove sampling theorem related to 10  
image processing.
- 2 (a) Perform the histogram equalization of the image. 10

|   |   |   |   |   |
|---|---|---|---|---|
| 4 | 4 | 4 | 4 | 4 |
| 3 | 4 | 5 | 4 | 3 |
| 3 | 5 | 5 | 5 | 3 |
| 3 | 4 | 5 | 4 | 3 |
| 4 | 4 | 4 | 4 | 4 |

- (b) What are the various smoothing technique available in image enhancement? Explain in brief. **10**
- 3** a. What is DST? Explain properties of DST with its application. **10**
- b. What are the properties of Hadamard Transform? Find Hadamard matrix  $H_3$ . **10**
- 4** a. What do you mean by image segmentation? Explain different image segmentation technique. **10**
- b. Explain Hough Transform with suitable example. **10**
- 5** What are the applications of MATLAB for digital image processing? **10**
- 6** Write short notes : (any two) **5×2=10**
- (a) Clipping and thresholding
- (b) RGB color
- (c) Histogram specification.
-