

B.TECH. SEM -VII ELECTRONICS / (E & TC ENGG.) 2014
COURSE (CBCS) : SUMMER - 2018
SUBJECT: ELECTIVE-I 2) DIGITAL IMAGE PROCESSING

Day: **Friday**
Date: **25/05/2018**

S-2018-2504

Time: **02.30 PM TO 05.30 PM**
Max Marks: 60

N.B.:

- 1) All questions are **COMPULSORY**.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Draw diagrams or figures **WHEREVER** necessary.
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Q.1 Describe the terms sampling and quantization in detail and hence explain its role in image quality and size. **(10)**

OR

Q.1 Write a brief note on components of image processing system. **(10)**

Q.2 Elaborate image enhancement with suitable example using contrast enhancement and photometric correction. **(10)**

OR

Q.2 What is spatial filtering? Describe smoothing and sharpening. **(10)**

Q.3 a) What is need of Image compression? Discuss fidelity criteria for image compression. **(05)**

b) Write short note on wavelet transform. **(05)**

OR

Q.3 What is Lossy compression? Describe JPEG image compression. **(10)**

Q.4 What are the basic operations of morphology and hence explain Hit or Miss transform and its application. **(10)**

OR

Q.4 How Opening and Closing is derived from erosion and dilation operation? **(10)**

Q.5 What is Image Segmentation? Describe region based segmentation with suitable example. **(10)**

OR

Q.5 Write a short note on: **(10)**

a) Hough transform

b) Boundary descriptors

Q.6 Discuss various applications of Digital Image Processing. **(10)**

OR

Q.6 Describe Iris recognition system in detail. **(10)**

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