Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 02

Total No. of Questions : 18

B.Tech.(CSE) (2011 Onwards E-III)   (Sem.–7,8)
DIGITAL IMAGE PROCESSING
Subject Code : BTCS-915
M.Code : 71907

Time : 3 Hrs.   Max. Marks : 60

INSTRUCTION TO CANDIDATES :
1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students has to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students has to attempt any TWO questions.**

SECTION-A

Explain briefly :

1) Define Digital image.

2) Differentiate photopic and scotopic vision.

3) What is simultaneous contrast?

4) Define Sampling and Quantization.

5) Define arithmetic coding.

6) What are the three types of discontinuity in digital image?

7) Give the relation for Rayleigh noise.

8) What is maximum filter and minimum filter?

9) What is global, Local and dynamic or adaptive threshold?

10) How effectiveness of quantization can be improved?

SECTION-B

11) Specify the properties of 2D Fourier transform.

12) What is data redundancy? Explain three basic data redundancy.

13) Discuss the various image representation approaches.

14) Specify the objective of image enhancement technique. What is contrast stretching?

15) What is JPEG? What are the coding systems in JPEG?

SECTION-C

16) Explain the basic Elements of digital image processing.

17) What is Image restoration? Draw and explain the basic block diagram of the restoration process. Give two areas where restoration process can be applied.

18) What is Image Segmentation? Explain Edge Detection in details.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.