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

Total No. of Questions : 18

B.Tech.(CSE) (2012 to 2017 E-III)   (Sem.–7)
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 have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Explain briefly :

1) What is sampling and quantization?

2) What is the significance of color model?

3) What is log transformation? How it is useful in image processing?

4) What is difference between spatial and frequency domain filters?

5) What is image restoration?

6) What is Psychovisual redundancy?

7) What is inverse filtering?

8) What is contrast stretching?

9) What is meant by edge linking?

10) What is pixel depth?

SECTION-B

11) What are various fundamental steps in image processing? Explain.

12) Describe histogram equalization technique used for image enhancement.

13) Explain image restoration using minimum mean square error filtering.

14) With an example, explain Huffman coding.

15) Discuss region based segmentation techniques.

SECTION-C

16) What is Fourier transform? Write and explain its properties. Also write the differences between Fourier and Wavelet transform.

17) How do spatial filters help in enhancement of digital images? List and explain various types of spatial filters with examples.

18) What is image compression? Explain the working of JPEG compression in detail.

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.