

Roll No.

Total No. of Pages : 02

Total No. of Questions : 18

B.Tech. (ECE) (2012 to 2017 E-II) (Sem.-7)

SPEECH & IMAGE PROCESSING

Subject Code : BTEC-912

M.Code : 71916

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS 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

Answer briefly :

1. Explain the need of edge linking.
2. Why false contouring occurs?
3. What is image restoration?
4. Define Haar transform.
5. Explain any two applications of image segmentation techniques.
6. What is need of data compression?
7. How human speech is produced?
8. What is the concept of histogram equalization?
9. What is IIR?
10. What are the elements of speech recognition?

SECTION-B

11. What is the concept of histogram equalization?
12. Give the linear filter mask for detecting vertical edges.
13. What are the various applications of image histogram in digital image processing? Explain with example of Histogram.
14. Explain RGB and CMYK color models and their color range values. Elaborate their memory requirements.
15. Explain different edge detection operator and compare them.

SECTION-C

16. Describe the fundamental steps of image processing. Also explain the basic elements of digital image processing.
17. Write a short notes on :
 - a) JPEG compression
 - b) Noise filters
18. What are the different applications of image segmentation? Explain different image segmentation techniques.

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.