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P.E.S. College of Engineering, Mandya - 571 401

(An Autonomous Institution affiliated to VTU, Belgaum)

Sixth Semester – B.E., Information Science and Engineering

Semester End Examination; June - 2016

Multimedia Computing

Time: 3 hrs

Max. Marks: 100

Note: Answer **FIVE** full questions, selecting **ONE** full question from each **unit**.

UNIT - I

- 1 a. Differentiate between: i) Strongly and weakly periodic data streams 10
 ii) Inter related and Non interrelated data steams
- b. Explain the following: i) Asynchronous Transmission mode 10
 ii) Synchronous transmission mode iii) Isochronous Transmission mode.
- 2 a. Draw and explain the components of a speech synthesis system. 10
 b. Explain the process of speech recognition with the help of neat diagram. 10

UNIT - II

- 3 a. What are the various properties of an image explain them. 6
 b. What is the need of image segmentation? Illustrate with an example how split and merge algorithm is used in image segmentation. 10
 c. Explain gray level co-occurrence matrix. 4
- 4 a. Describe any five important measures of video images. 10
 b. Why animations need to be controlled? What are the techniques available to control animation? 10

UNIT - III

- 5 a. With block diagram, explain the major steps of Data compression and also why compression is needed? 10
 b. Explain the Huffman coding algorithm with an example and Run length coding with an example. 10
- 6 a. Explain the steps of the JPEG compression with neat diagram. 10
 b. Explain lossy sequential DCT based mode. 10

UNIT - IV

- 7 a. Explain the history of optical storage. 10
 b. Describe basic Technology used in optical disc with a neat sectional view. 10
- 8 a. Compare the DVD with conventional CD technology. 10
 b. Describe Mode 1 and mod 2 operation of CD -ROM. 10

UNIT - V

- 9 a. Explain analysis of individual images. 10
 b. Explain the applications of content analysis. 10
- 10 a. Explain the TIFF file format Header and Its structure. 10
 b. Draw TWAIN architecture and explain details of protocol layers. 10