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Question Paper Code: 52238

M.E. DEGREE EXAMINATION, NOV 2016

Elective

Communication Systems

15PCM505 - DATA COMPRESSION

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 20 = 100 Marks)

1. (a) Discuss briefly about the storage requirements for multimedia applications. (20)

Or

- (b) (i) Describe the classification of compression methods. Explain their merits, demerits and applications. (10)

- (ii) Describe the different error analysis and methodologies with suitable scenarios. (10)

2. (a) (i) Explain the LZ 77 approach with an example. (10)

- (ii) Using adaptive Huffman tree process (*a a r d v*). Draw and explain update procedure of the tree. (10)

Or

- (b) For the given table , decode a sequence of length 10 with tag 0.63215699. (20)

<i>Letters</i>	<i>Probability</i>
<i>a1</i>	<i>0.2</i>
<i>a2</i>	<i>0.3</i>
<i>a3</i>	<i>0.5</i>

3. (a) Describe the working of the various components of the MPEG audio encoder and decoder. (20)

Or

- (b) (i) Explain various speech compression techniques. (10)

- (ii) Explain silence compression. (10)

4. (a) Explain the working of SPIHT coders and write the pseudo-code algorithm for its implementation. (20)

Or

- (b) Explain in detail, how the image compress performed using wavelet transforms. (20)

5. (a) (i) With neat sketch, explain MPEG 1 and H.261 standard and compare them. (10)

- (ii) Explain motion estimation and compensation with neat sketch. (10)

Or

- (b) Describe the video sequence layers of H.261 standard and their related frame formats. (20)
