Printed Pages : 1 **Roll No.** | | | | | | | | | | | **NCS085**

B. TECH.

THEORY EXAMINATION (SEM–VIII) 2016-17

DATA COMPRESSION

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

SECTION – A

1. Attempt all parts of the following question: **10 x 2 = 20**

(a) What do you understand by entropy ?
(b) What do you mean by loseless compression?
(c) Define data compression.
(d) Define compression ratio.
(e) Differentiate between Fidelity and quality.
(f) Discuss binary code.
(g) Discuss Huffman code
(h) Define distortion.
(i) Define the term PPM.
(j) Discuss Golomb coding.

SECTION – B

2. Attempt any five of the following questions: **5 x 10 = 50**

(a) Explain rice coding and it's implementation.
(b) Explain minimum variance Huffman code.
(c) Explain encoding and decoding in LZW algorithm.
(d) Explain Adaptive Quantization.
(e) Explain prediction with partial match.
(f) Explain scalar & vector quantization.
(g) Explain modeling and coding with the help of example. What do you understand by prefix code?
(h) What are two observations on which Huffman procedure is based regarding optimum prefix code? What are the various applications of Huffman coding?

SECTION – C

Attempt any two of the following questions: **2 x 15 = 30**

3. What do you understand by adaptive quantization? Explain the various approaches to adapting the quantizer parameters.

4. What is Facsimile Enoding? Explain Run-Length coding technique used earlier for Facsimile.

5. What do you understand by Uniform quantizer? How uniform quantization of a uniformly distributed sources and uniform quantization of non-uniform sources is done?

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