Reg. No. : | | | | | | | | | | |

Question Paper Code: 31489

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2017

Elective

Electronics and Communication Engineering

01UEC911 - MULTIMEDIA COMPRESSION AND COMMUNICATION

(Regulation 2013)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define multimedia.
2. What is raster-scan principle?
3. List the major features of H.263 standard.
4. Outline the key features of MPEG 1 standard.
5. Define source encoding.
6. Give one application each suitable for lossy and loseless compression.
7. Mention the major challenges involved in implementation of VoIP.
8. List the applications of VoIP in multimedia systems.
9. Predict the limitations of best efforts service.
10. Define stream stored audio.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the various components of multimedia text, graphics in detail. Discuss the essential characteristics of text and graphics. (16)

Or

(b) Describe with necessary diagram about video and explain its formats in detail. (16)

12. (a) (i) Explain the principle, limitations and applications of linear predictive coding. (10)

(ii) Draw the DPCM encoder and decoder and explain briefly. (6)

Or

(b) (i) Describe the MPEG 4 coding principles with neat diagrams of the encoder and decoder. (8)

(ii) Discuss about perpetual coding video compression in detail. (8)

13. (a) Design a huffman code for a source A={a_1, a_2, a_3, a_4, a_5}with P(a_1)=p(a_2)=p(a_3)= 0.25 and p(a_4)=p(a_5)=0.125. Find the average length, efficiency, redundancy for the designed code. (16)

Or

(b) Explain the procedure of arithmetic and LZW coding algorithms for a source with suitable example. Compare their codeword lengths. (16)

14. (a) Explain the network architecture of H.323 in detail with neat diagram. (16)

Or

(b) (i) Describe about the different CODEC methods in detail. (12)

(ii) Give a brief account on SS7. (4)

15. (a) (i) Give a detailed notes on multimedia protocols for real time interactive applications with an example. (8)

(ii) Explain the different scheduling mechanisms. (8)

Or

(b) (i) Give a brief note on integrated and differentiated services. (8)

(ii) Explain the principle and applications of RSVP. (8)

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