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Question Paper Code: 59410

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2018

Elective

Electronics and Communication Engineering

15UEC910 - MULTIMEDIA COMPRESSION AND COMMUNICATION

(Regulation 2015)

Duration: Three hours

Maximum: 100 Marks

PART A - (5 x 1 = 5 Marks)

1. Identify a multimedia component CO1- R
 - (a) Speaker (b) Modem
 - (c) Video Camera (d) UPS

2. Joint Photographic Experts Group (JPEG) is used to compress. CO1 -R
 - (a) Music (b) Pictures (c) Frames (d) Images

3. Audio compression can be used for. CO2- R
 - (a) Voice and Data (b) Speech or Music (c) Picture and Colours (d) Video and Voice

4. In Voice Over IP, Term SIP stands for. CO2 -R
 - (a) Session Initiation Path (b) Session Initiation Port
 - (c) Session Initiation Protocol (d) Session Initiation Packet

5. In Real Time Interactive Audio Video, conferencing requires two way communications between. CO3 -R
 - (a) Receivers and senders (b) Packet to Frames
 - (c) Pixels to Packets (d) Frames to Pixels

PART – B (5 x 3= 15Marks)

6. Define multimedia CO1 -R
7. Distinguish between static and dynamic Huffman coding. CO2- R
8. Identify the frame types in video compression. CO3- R
9. What are the major challenges involved in the implementation of VOIP. CO4- R
10. Summarize the important points about interactivity for streaming stored audio/Video. CO5- R

PART – C (5 x 16= 80Marks)

11. (a) Write short notes on Multimedia components and their characteristics. CO1- App (16)

Or

- (b) Discuss the interactive applications over the internet and entertainment applications of multimedia. CO1 -App (16)

12. (a) Define the following: CO2 -App (16)
 - (i) Source encoders & destination decoders
 - (ii) Lossless and Lossy compression techniques
 - (iii) Entropy Encoding
 - (iv) Source Encoding

Or

- (b) Summarize the principle of : CO2 -Ana (16)
 - (i) Arithmetic coding
 - (ii) LZW algorithm

13. (a) Describe with the aid of a schematic diagram, the operation of a basic DPCM signal encoder and decoder. CO3 -Ana (16)

Or

- (b) Assess the MPEG-2 DCT blocks are derived from each macro block in an I-frame in the field mode and in the frame mode. State an application for each mode. CO3- Ana (16)

14. (a) Explain the H.323/ SIP network architecture along with protocol stack with neat diagram. CO4 -U (16)

Or

- (b) Explain the call establishment and release phase of VOIP CO4 -Ana (16)
connection with neat diagram.
15. (a) Identify the limitations of best effort services in making CO5- U (16)
multimedia networking. Explain in detail.
- Or
- (b) Explain intserv model and per-flow reservation of resources. CO5- U (16)

