C   Reg. No. :

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. A video consists of a sequence of   CO1- R

    (a) Frames   (b) Signals   (c) Packets   (d) Slots

2. Which of the following is an example of a lossy image format?   CO2- R

    (a) TIFF using LZW compression   (b) JPEG of medium quality

    (c) GIF without dithering   (d) All of the above

3. Most common compression technique that is used to create CD-quality   CO3- R
    audio based on perceptual encoding technique is called

    (a) Perceptual Encoding   (b) MPEG

    (c) JPEG   (d) Predictive Encoding

4. H.323 uses G.71 or G.723.1 for   CO4- R

    (a) Compression   (b) Communication   (c) Controlling   (d) Conferencing

5. Real time streaming is most useful for   CO5- R

    (a) Long video clips   (b) Short video clips

    (c) Extremely short and low quality videos   (d) None of the above

PART – B (5 x 3= 15 Marks)

6. Write the skill set requirements of multimedia designer and multimedia   CO1- App
    programmer.

7. Summarize the significance and applications of GIF and TIFF image file   CO2- U
    formats.

8. Differentiate MPEG-1 and MPEG-2 standards.   CO3- U

9. Justify why QOS is measured in VOIP.   CO4- U

10. Outline the features of best effort service.   CO5- U

PART – C (5 x 16= 80Marks)

11. (a) Explain why most data networks operate in a packet mode. Hence   CO1- U   (16)
        explain why services involving audio and video are supported.

Or

(b) List out the various multimedia components and explain their   CO1- U   (16)
    features and applications.

12. (a) The following character string is to be transmitted using Huffman   CO2- App (16)
        coding A B A C A D A B A C A D A B A C A B A B. Compute
        and draw the Huffman code tree.

Or

(b) (i) Describe the step by step process of JPEG Encoding.   CO2- U   (10)

    (ii) Write the differences between lossless and lossy compression.   CO2- U   (6)

13. (a) Analyze the H.261 video encoder and infer the relation to the   CO3- Ana (16)
        macroblock and frame formats.

Or

(b) Describe the Differential Pulse Code modulation encoder and   CO3- U   (16)
    decoder with schematic diagram.

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

Or

(b) (i) Discuss the VoIP challenges.   CO4- U   (8)
    (ii) How SIGTRAN is related with IP & SS7? Explain.   (8)

15. (a) (i) Give a brief note on integrated and differential services.   CO5 U   (8)

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

Or

(b) Give a detail notes on Multimedia protocols for real time   CO5 U   (16)
    interactive application with an example.