Printed Pages : 2   Roll No. ☐☐☐☐☐☐☐☐☐☐   CS-224

M.TECH. (SEM–II)

CARRY OVER EXAMINATION 2016-17

MULTIMEDIA SYSTEMS

Time : 3 Hours   *Max. Marks : 100*

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

1.   **Attempt any Two parts of the following**   **2 × 10 = 20**

   (a)   Name the different multimedia communication techniques and explain any two communication techniques' in detail.

   (b)   What do you mean by encoding? Give the difference between source encoding and channel encoding.

   (c)   How does circuit switching differ from packet switching? What difficulties are encountered in sending packetized speech?

2.   **Attempt any Two parts of the following:**   **2 × 10 = 20**

   (a)   What is meant by ATM? What does the qualifier "Asynchronous" in ATM refer to? Is ATM a real-time architecture? Highlight some features of ATM. What is remote method invocation?

   (b)   What do you mean by amount of information? Explain the different types of multimedia information.

   (c)   Why does a quantized signal need to be encoded for transmission?

3.   **Attempt any Two parts of the following:**   **2 × 10 = 20**

   (a)   Provide stage-by-stage description of a differential pulse code modulation (DPCM) system with block diagrams of the transmitter and receiver section.

   (b)   What is lossless compression? Explain any two lossless compression standards.

   (c)   Explain any two image compression techniques in detail.

4.   **Attempt any Two parts of the following:**   **2 × 10 = 20**

   (a)   What is the need of audio/video standards? Explain different MPEG standards and also give their frame structure.

   (b)   What do you mean by surfing the World Wide Web (WWW)? What is Hypertext document? Name its main elements.

   (c)   Differentiate between multimedia and hypermedia. What are the hardware and software requirements for multimedia computer?

5.   **Attempt any Two parts of the following:**   **2 × 10 = 20**

   (a)   What does TCP/IP stand for? Explain. Give a correspondence between the layers of the OSI reference model and those of internet model.

   (b)   Explain the process of video capturing and digitization. How can MIDI be used with modern data compression techniques?

(c) Write short notes on any two:

    (i)   Entertainment networks

    (ii)   Text compression techniques

    (iii)   JPEG standard