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Fifth Semester M.C.A Degree Examination, January/February 2005

Master of Computer Applications Multimedia Communication

Time: 3 hrs.]

[Max.Marks : 100

Note: Answer any *FIVE* full questions.

1. (a) What are the important applications of multimedia communications? Explain (8 Marks)
- (b) What is meant by data stream? Give examples. (4 Marks)
- (c) Describe different data stream characteristics of continuous media. (8 Marks)
2. (a) Briefly explain digital representation of audio (10 Marks)
- (b) What are MIDI reception modes? Explain MIDI devices and messages. (10 Marks)
3. (a) With suitable examples discuss different types of image formats. (10 Marks)
- (b) Explain the steps involved in image recognition process. (10 Marks)
4. (a) Explain the important measures of visual representation with respect to video signal. (10 Marks)
- (b) Describe color encoding techniques. (10 Marks)
5. (a) How do you classify data compression techniques? (5 Marks)
- (b) Explain Runlength and Arithmetic encoding methods. (5 Marks)
- (c) How do you derive data units of an image in JPEG? Explain the steps involved in lossy sequential DCT based mode. (10 Marks)
6. (a) Briefly explain encoding techniques of MPEG? (12 Marks)
- (b) Suppose an audio signal is sampled with the frequency of 44.1 KHz and each sample is coded with 16 bits find data rate if a single channel audio data are transferred from the CD player of workstation to remote station over network. Determine the maximum message size if the samples on CD are assembled into frames and 75 of these audio messages are transmitted per second according to the CD format standard. (8 Marks)
7. (a) With suitable examples explain disk scheduling algorithms in multimedia system. (12 Marks)
- (b) What are the characteristics of ATM? Explain. (8 Marks)
8. (a) List and explain the applications of transport protocols which are suitable for multimedia. (10 Marks)
- (b) Describe the requirements and features of multimedia server. (10 Marks)

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