Code: AC21/AT12   **Subject: MULTIMEDIA SYSTE...**

AMIETE – CS/IT (OLD SCHEME)

Time: 3 Hours   **OCTOBER 2012**   Max. Marks: 1...

PLEASE WRITE YOUR ROLL NO. AT THE SPACE PROVIDED ON EACH PAGE IMMEDIATELY AFTER RECEIVING THE QUESTION PAPER.

NOTE: There are 9 Questions in all.

- **Question 1 is compulsory and carries 20 marks. Answer to Q.1 must be written in the space provided for it in the answer book supplied and nowhere else.**
- **The answer sheet for the Q.1 will be collected by the invigilator after 45 minutes of the commencement of the examination.**
- **Out of the remaining EIGHT Questions answer any FIVE Questions. Each question carries 16 marks.**
- **Any required data not explicitly given, may be suitably assumed and stated.**

Q.1   Choose the correct or the best alternative in the following: **(2×10)**

a. XML stands for

(**A**) Extended Markup Language   (**B**) Extensible Markup Language
(**C**) Extended Multimedia Language   (**D**) None of these

b. The JPEG standard supports:

(**A**) Sequential and Progressive mode
(**B**) Hierarchical and Lossless mode
(**C**) Both (**A**) and (**B**)
(**D**) None of these

c. MPEG-2 is designed for

(**A**) Digital TV   (**B**) HDTV
(**C**) Both (**A**) and (**B**)   (**D**) None of these

d. A sequence of padding for reference VOPs in MPEG-4 is in the order of

(**A**) First horizontal then vertical
(**B**) First vertical then horizontal
(**C**) Both horizontal and vertical simultaneously
(**D**) None of these

e. Which of the following is a coding technique used in vocoders?

(**A**) Huffman   (**B**) CELP
(**C**) Run-length   (**D**) None of these

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f. FDDI supports

(A) Synchronous   (B) Asynchronous
(C) Both (A) and (B)   (D) None of these

g. Which of the following is an example of content based information retrieval search engine to query images?

(A) JPEG   (B) MPEG
(C) VoIP   (D) C-BIRD

h. MIDI stands for_____

(A) Media Interface Development Information
(B) Musical Instrument Digital Interface
(C) Multimedia and hypertext information Development Interface
(D) None of these

i. The IP layer provides services of:

(A) Packet addressing   (B) Packet fragmentation
(C) Both (A) and (B)   (D) None of these

j. RTP is a _____.

(A) Setup protocol for Internet resource reservation
(B) Real –time Transport protocol
(C) Real time protocol
(D) Both (A) and (C)

_____

Answer any FIVE Questions out of EIGHT Questions.
Each question carries 16 marks.

_____

Q.2 a. Define multimedia. Also state its applications.   **(8)**

b. What do you understand by Isochronous transmission mode?   **(4)**

c. Explain Hypertext, Hypermedia with suitable examples.   **(4)**

Q.3 a. What is MPEG-2 and what is its target application domain?   **(8)**

b. What is MIDI? What are the components of MIDI Synthesizer?   **(8)**

Q.4 a. Explain the characteristic of data stream used by H.261.   **(8)**

b. Why was padding introduced in MPEG-4 VOP-based coding? Name some potential problems of padding.   **(8)**

Q.5   a.   What do you understand by the term DVI? How it helps in video encoding?

                                                              (8)

      b.   Which compression method is used in JPEG 2000? List and explain the steps of the same method.   **(8)**

Q.6   a.   What do you understand by Interactive TV (ITV)? State activities supported by ITV. Also list the components required to perform those activities.   **(8)**

      b.   What do you understand by DMIF? State its application in multimedia.   **(8)**

Q.7   What do you understand by protocol? Explain the individual layers of the ISO-OSI Reference Model which provides the basis for communication of multimedia distribution in a network.   **(2+14)**

Q.8   a.   When should RTP be used and when should RTSP be used? Is there any advantage in combining the protocols?   **(4)**

      b.   State any four parameters on which Quality of service for multimedia depends.   **(4)**

      c.   How images can be stored in databases? How it is different from motion video?   **(8)**

Q.9   Write short note on the following:

           (i)   Resource Management in MOS.
           (ii)   Data stream characteristics for continuous media.   **(8×2)**