ROLL NO. _____

CODE: AT65   **SUBJECT: MULTIMEDIA SYSTEMS**

AMIETE – IT

Time: 3 Hours   **JUNE 2014**   Max. Marks: 100

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. Which of the following is not a type of MIDI system message?

   (A) Voice message   **(B)** Common message
   (C) Real- time message   **(D)** Exclusive message

b. Which one of the following is not a file format for Images?

   (A) GIF   **(B)** EXIF
   (C) AIFF   **(D)** PNG

c. The television signal format mostly used in the United States and Japan is known as _____.

   (A) NTSC   **(B)** PAL
   (C) SECAM   **(D)** None of these

d. Video signal cannot be organized in one of the following given ways that is known as _____.

   (A) Component Video   **(B)** External Video
   (C) Composite Video   **(D)** S-Video

e. Which of the following is not a lossless compression technique?

   (A) Dictionary Based Coding   **(B)** Huffman Coding
   (C) Adaptive Huffman Coding   **(D)** Karhunen – Loeve Transform

f. Which of the following is/are Quality of Service (QoS) parameter for multimedia data transmission?

   (A) Latency   **(B)** Packet Loss
   (C) Jitter   **(D)** All of these

g. With reference to multimedia elements, pick the odd one out of the following:-

    (A) Audio   **(B)** Voice Script
    (C) Video   **(D)** Text

h. The first and last frames of an action are called _____.

    (A) End Frames   **(B)** In between Frames
    (C) Key Frames   **(D)** None of these

i. Which of the following is not a rendering tool for Animation?

    (A) 3D Studio Max   **(B)** Softimage XSI
    (C) RenderMan   **(D)** None of these

j. The following is not a color model in Video?

    (A) RGB   **(B)** YIQ
    (C) YUV   **(D)** YCbCr

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

Q.2   a.   Describe about the different components of Multimedia.   **(5)**

       b.   Explain the different types of scripts used in Director tool.   **(5)**

       c.   Discuss the various methods of accomplishing Animation in Flash.   **(6)**

Q.3   a.   Discuss about Subtractive Color Model.   **(5)**

       b.   Differentiate between Component Video and Composite Video.   **(5)**

       c.   Explain the following terms:
           (i)   Progressive Scanning
           (ii)   Interlaced Scanning
           (iii) Chroma Subsampling   **(6)**

Q.4   a.   Discuss the key concepts of Digitization process of sound.   **(5)**

       b.   Give the compression code for string "ABABBABCABABBA" using LZW compression.   **(7)**

       c.   What do you understand by Audio Filtering?   **(4)**

Q.5   a.   Discuss about the Discrete Cosine Transform Coding Technique.   **(8)**

ROLL NO. _____

b. The JPEG standard supports numerous modes. Write about some of the commonly used modes. **(8)**

Q.6 a. Explain I –Frame Coding. **(5)**

b. Describe H.261 Video Bitsream syntax. **(6)**

c. Discuss the differences between MPEG2 and MPEG1. **(5)**

Q.7 a. Discuss the five levels of hierarchical description of a scene in MPEG4 visual bitsream. **(6)**

b. Differentiate between VOP-based coding and frame based coding. **(5)**

c. Discuss the two types of prediction used in CELP coders. **(5)**

Q.8 a. Explain about the various parameters of Quality of Service (QoS) of Multimedia Data Transmission. **(8)**

b. Write brief notes on any **TWO** of the following:
(i)   RSVP
(ii) IP-Multicast
(iii) RTP   **(4×2 = 8)**

Q.9 a. Explain the different types of Animation Techniques. **(4)**

b. Write brief notes on
(i)   Tweening
(ii) DVD formats
(iii) Magneto-Optical Discs

                                                             (4×3 = 12)