MULTIMEDIA SYSTEMS & TECHNOLOGY

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks
for the questions.

Illustrate your answers with suitable sketches and
examples wherever necessary.

PART–A

All questions are mandatory

1. Fill up the gaps :   1×15=15

   (a) Hardware and Software are the two basic
   _____ of Multimedia.

   (b) Time dependent medium are known as
   _____ media.

   (c) Digital signals have two amplitude levels
   called _____.

(d) Windows 10 is a _____ software.

(e) Sound whose frequency is above 20,000 Hz is called_____.

(f) LZW encoding is used in _____ data compression.

(g) Boldface is a typical font _____.

(h) The smallest unit of a digital image is known as _____.

(i) Tones are created by adding _____ to a hue or colour.

(j) The technique to reduce staircase effect in limited resolution output devices is called _____.

(k) The Y-signal encodes _____ information in the YUV colour model.

(l) Laser printers are also sometimes known as _____ printers.

(m) The unit of sound volume is called _____.

(n) The range of a Personal Area Network (PAN) extends to _____ metres.

(o) The process of building a single frame from two fields is called _____.

2. Choose the correct answer from the following questions: 1×10=10

(A) Which among the following is not a multimedia object ?

(i) Graphics   (ii) Animation

(iii) Television   (iv) Video

(B) What is the shortcut key combination to deselect a selected area in Adobe Photoshop ?

(i) Ctrl+T   (ii) Ctrl+D

(iii) Ctrl+M   (iv) Ctrl+E

(C) Which Colour System is used bycolour printers ?

(i) RGB   (ii) HSB

(iii) CMYK   (iv) YUV

(D) Which among these data compression algorithms creates a Binary Tree ?

   (i) Run Length Encoding

   (ii) Huffman Algorithm

   (iii) JPEG

   (iv) LZW

(E) The ASCII character set is made up of how many bits ?

   (i) 7   (ii) 8

   (iii) 127   (iv) 128

(F) A printed page might be presented in which of these orientations ?

   (i) Newscape   (ii) Portrait

   iii) Flat-file   (iv) Node

G) TIFF stands for :

   (i) Transitional Image File Format

   (ii) Total Inclusion File Format

   (iii) Table Index File Format

   (iv) Tagged Image File Format

(H) The full form of HDMI is :

    (i)   Hard Digital Multimedia Interface

    (ii) Heavy Duty Multimedia Interface

    (iii) High Definition Multimedia Interface

    (iv) High Density Multimedia Interface

(I) In a 16-bit image, the 16 bits are divided into :

    (i)   5 bits Blue, 6 bits Red and 5 bits Green

    (ii) 5 bits Red, 6 bits Blue and 5 bits Green

    (iii) 5 bits Red, 6 bits Green and 5 bits Blue

    (iv) 4 bits Blue, 8 bits Red and 4 bits Green

(J) The most precious asset you can bring to the multimedia workshop is your :

    (i)   Programming Skill

    (ii) Musical Ability

    (iii) Creativity

    (iv) Film and video production talent

PART – B

Answer any *three* questions.

3. (a) What are the characteristics of multimedia systems ?   4

   (b) Mention ten different fields or areas where multimedia can be applied ?   5

   (c) What are analog signals and digital signals ? Explain with a diagram.   4+2=6

4. (a) What are the different ways of acquiring digital images ?   5

   (b) Describe the RGB Colour System.   4

   (c) Write a brief note on *Dithering* and *Anti-Aliasing*.   6

5. (a) What are the differences between MIDI and Digital Audio ?   10

   (b) Describe the process of Splicing and Assembly.   5

6. (a) What are interlaced and progressive videos ?   3+3=6

(b) Describe component video and composite video.

$3+3=6$

(c) What are Stereoscopic videos ?

3

7. (a) Write briefly on Alpha Testing and Beta Testing.

10

(b) Describe the role of an Interface Designer.

5