2021

COMPUTER SCIENCE — HONOURS

Paper : DSE-A-4

(Multimedia and its Application)

Full Marks : 50

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer **question no. 1** and **any four** from the rest.

1. Answer **any five** questions : 2×5

   (a) Give two examples of hypermedia.

   (b) How is 2-D and 3-D animation different?

   (c) How still images are generated by the computer?

   (d) State two examples of multimedia used in daily life.

   (e) Define rasterization.

   (f) How is NTSC and PAL systems for HDTVs different?

   (g) State the two main categories of typefaces. How are these different?

   (h) Define image morphing.

2. (a) Briefly explain how bitmap images can be converted to vector drawn images.

   (b) How many colours are available in a 24-bit colour palette?

   (c) Cite the various image file types used in multimedia. 4+1+5

3. (a) Discuss briefly on the various components of multimedia.

   (b) Name the three categories of multimedia authoring tools. Explain each in few words. 4+6

4. (a) State two advantages and two disadvantages of MIDI files.

   (b) Briefly discuss the various audio file formats used in multimedia systems. 4+6

5. (a) How are Component video signal, S-video signal and Composite video signal different from each other?

   (b) Discuss three implications of using digital video in multimedia.

   (c) Why is preplanning essential for a successful video project?

   (d) Name a non linear editing software and how is it used in video editing? 3+3+2+2

Please Turn Over

6. (a) Let us suppose we are to design an animation of a woman walking across the screen. What can be the first key frame and last key frame to be portrayed if we follow cel animation technique?

   (b) Discuss the principles of animation.

   (c) How is animation used in multimedia? 4+3+3

7. (a) Differentiate between static and dynamic trans-coding.

   (b) Discuss the difference between typeface and font and list down three attributes of font. 5+(2+3)

8. (a) Describe broadly, four hardware peripheral connections used in multimedia.

   (b) Name the four stages of a multimedia project. 8+2

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