2021

COMPUTER SCIENCE — GENERAL

Paper : SEC-B-X-1

(Multimedia and its Applications)

Full Marks : 80

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 ten** questions :   2×10

   (a) What is GUI?

   (b) What is Multimedia?

   (c) What is meant by the terms static (or discrete) media and dynamic (or continuous) media?

   (d) What is CCD?

   (e) What is Virtual Reality?

   (f) How can the Jaggies be avoided?

   (g) How many types of Multimedia Authoring tools are there? Name them.

   (h) What is noise in multimedia data?

   (i) What is hypermedia?

   (j) What is digital audio?

   (k) What is JPEG?

   (l) What do you mean by resolution of an image?

   (m) Define dithering.

   (n) Name any two multimedia QoS parameters.

2. (a) What is meant by delivering of Multimedia? Describe how it is done.

   (b) What do you mean by audio-video synchronization in multimedia?   (2+8)+5

3. (a) What is linear and non-linear Multimedia?

   (b) Describe in short the uses of Multimedia.

   (c) How are the hypermedia structures defined in terms of links and nodes?   2+8+5

Please Turn Over

4. (a) What is Multimedia server?

    (b) Describe the role of Multimedia servers.

    (c) How does a vector drawing work? 2+8+5

5. (a) What is Typeface and Font?

    (b) Describe the use of Serif and Sans Serif Fonts.

    (c) What are the basic methods of making computerized colour? Briefly describe any one of them.
        2+6+(2+5)

6. (a) What is Bitmap Images?

    (b) How a Bitmap Image is represented?

    (c) How does vector drawn image differ from bitmap images? 5+5+5

7. (a) What is Codec?

    (b) How is Analog video created?

    (c) What do you mean by a grayscale image? Explain its storage in computer memory. 2+6+(2+5)

8. (a) Explain any one audio compression technique.

    (b) How is Digital Audio is sampled?

    (c) What do you mean by video frame rate? Estimate the memory required for a video of 25 fps played for 10 seconds having frame resolution of 200 × 300. 5+5+5