This question paper contains 4 printed pages]

1960

B.Sc. (Hons.) Computer Science/VI Sem.   C

Paper 605 (II)—MULTIMEDIA APPLICATION

(Admissions of 2001 to 2010)

Time : 3 *Hours*   *Maximum Marks* : 75

(Write your Roll No. on the top immediately on receipt of this question paper.)

Section A is compulsory.

Attempt any *four* questions from Section B.

Parts of a question must be attempted together.

Section A (Compulsory)

1.   (*a*)   Differentiate between :   2×5=10

(*i*)   Temporal media and Non-Temporal media type

(*ii*)   Component and composite video signals

(*iii*)   Additive and Subtractive color models

(*iv*)   Lossy compression and Lossless compression

(*v*)   Symmetric and Asymmetric compression.

P.T.O.

(b) What are the thrree main developmental functions that a multimedia system must perform ? Use figures to illustrate the concept. 5

(c) Explain Dexter Hypertext Reference model used for information exchange. 5

2. (a) What is meant by Virtual Reality ? What is six degrees of freedom in Virtual reality space ? 5

(b) What are the benefits and drawbacks of multimedia in Training ? 5

(c) Define the template for Music Media Type. Explain the two music formats. 5

Section B

(attempt any *four* questions)

3. (a) Discuss any *three* text recognition techniques for converting Raster Text to ASCII. 3

(b) Discuss PCM. DPCM and ADPCM techniques for sound compression. 3

(c)   Give the 1D-Run Length Encoding and 2-D Run Length

Encoding for the following image :   4
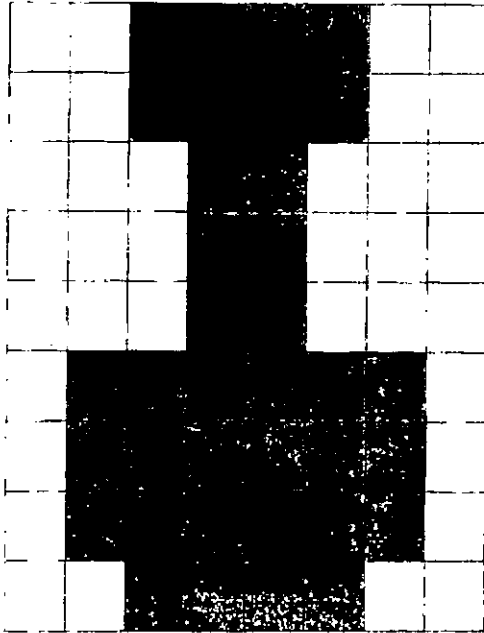
4.   (a)   List the steps to develop an interactive virtual reality

application.   5

(b)   Differentiate between Immersive and non-immersive

Virtual Reality.   3

(c)   What do you understand by the term "Telepresence" in

the virtual reality world ?   2

P.T.O.

5. (*a*) Explain the role of Glove based input in Virtual Reality. Describe the Data Glove. 4

   (*b*) Discuss PICT and GIF graphic file formats. 4

   (*c*) Explain CD-i disc format. 2

6. (*a*) Discuss the Standard and Placeable Windows Metafile Format. 4

   (*b*) State the limitations that restrict the usage of a PC for multimedia applications. 4

   (*c*) Describe the L*a*b color model. 2

7. (*a*) Name any *four* analog video formats and explain their usability. 5

   (*b*) Why do we need multimedia ? What are the basic components of Multimedia system ? 5

8. (*a*) Discuss the hardware and system software components added by IBM to support multimedia application. 5

   (*b*) How does ScriptX support cross platform compatibility ? 5