

Con. 3188-11.

(REVISED COURSE)

RK-4656

(3 Hours)

[Total Marks : 100

- N.B. :** (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assume **suitable** data if **necessary**.

1. (a) Compare and contrast TIFF file format and RIFF file format. 10
(b) You are appointed as a consultant to set up a Multimedia Laboratory in an engineering institute. Give specifications of components, configuration, connectivity, software etc. along with the assumptions. 10
2. (a) Describe the CCITT group 3 standard. How does CCITT group 4 differ from CCITT group 3 ? 10
(b) Explain JPEG compression in detail. 10
3. (a) Explain chroma sub-sampling. 5
(b) What is HDTV standard ? 5
(c) Explain different motion vector search techniques. 10
4. (a) Explain MPEG 1 compression in detail 10
(b) What are components of distributed multimedia system ? 10
5. (a) Explain MIDI standard with regard to MIDI messages and MIDI data format. 10
(b) Consider RTP session consisting of 4 users, all of which are sending and receiving RTP packets into the same multicast address. Total bandwidth is 400 kbps.
(i) RTCP will limit its traffic at what rate ?
(ii) A particular receiver will be allocated how much RTCP bandwidth ?
(iii) A particular sender will be allocated how much RTCP bandwidth ? 10
6. (a) One of the most important application using both technologies networks and multimedia is distance learning. You are appointed as a consultant to design the system for such an application. Specify the hardware and software requirements for the same if this application is to be used in distributed environment. 10
(b) Explain working of image scanner and hence explain reasons for use of CCD by these scanners. 10
7. Write short notes on (any **two**) :— 20
 - (a) Human factors and design considerations related to virtual reality
 - (b) Audio Compression
 - (c) Multimedia authoring.