Total No. of Questions : 10]

SEAT No. :

P2431

[Total No. of Pages : 3

[4758]-603

T.E. (Information Technology)

MULTIMEDIA TECHNOLOGIES

(2012 Course) (Semester - II) (314452) (End - Sem.)

Time : 2½ Hours] *[Max. Marks :70*

Instructions to the candidates:

1) ***All questions are compulsory.***
2) ***Neat diagrams must be drawn wherever necessary.***
3) ***Figures to the right indicates full marks.***
4) ***Assume suitable data, if necessary.***

Q1) a) Explain the concept of "Distributed Multimedia System" alongwith suitable applications. **[5]**

b) For each of the media types: audio, graphics, images and video; briefly discuss how sampling affects the quality of the data. **[5]**

OR

Q2) a) Why is data compression necessary for multimedia activities? Explain why lossy data compression is sometimes preferred over lossless. Give suitable example to justify your answer. **[5]**

b) Explain the Shanon Fano Encoding method with example. **[5]**

Q3) a) Explain Reflection, Diffraction and Interference with respect to sound wave. **[5]**

b) Draw and explain different chunks of WAVE file format. **[5]**

OR

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Q4) a) List two psychological phenomena that are exploited in MPEG audio compression. Briefly explain their meanings. **[5]**

b) GIF and JPEG are two commonly used image representations. Do they usually use lossless or lossy compression? State the major compression algorithm (for lossless) or the lossy steps of the algorithm (for lossy) for each. **[5]**

Q5) a) What are different types of frames in MPEG? How are these frames encoded? **[8]**

b) Explain the advantages of YC format over RGB format in video transmission also describe how RGB signals are converted into YC signals using register bridges. **[8]**

OR

Q6) a) Explain H .261 and H.263 video file formats. **[8]**

b) State and explain in brief Multimedia supported video formats on android. **[8]**

Q7) a) What are the 12 principles of animation? Explain any 3 in detail. **[8]**

b) What is OpenGL? State and explain an essential GLUT functions of OpenGL. **[8]**

OR

Q8) a) Explain OpenGL rendering pipeline with key stages. Draw suitable diagrams. **[8]**

b) What is animation? How it differs from the video? Enlist some tools used to create the animation. **[8]**

Q9) a) What is virtual reality? Describe the input and output devices used in Virtual Reality. **[6]**

b) Explain GStreamer Based Multimedia Framework with suitable diagram. **[6]**

c) Explain the following terms briefly: **[6]**

i) Multimedia over IP

ii) Media on Demand

OR

Q10)a) What is multimedia synchronization? State and explain important parameters associated with multimedia synchronization. **[6]**

b) Differentiate between the Virtual Reality and Augmented Reality by taking example. **[6]**

c) Briefly explain following broadcast schemes for video on demand. **[6]**

i) Staggered broadcasting

ii) Pyramid broadcasting

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