Registration No. :

Total number of printed pages – 2

B. Tech

BCSE 3302

Fifth Semester (Special) Examination – 2013
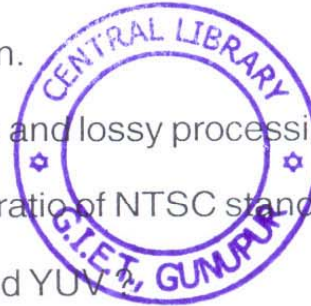
MULTIMEDIA TECHNOLOGIES

BRANCH : IT

QUESTION CODE : D 292

Full Marks – 70

Time : 3 Hours

Answer Question No. **1** which is compulsory and any **five** from the rest.
The figures in the right-hand margin indicate marks.

1. Answer the following questions :   2×10

    (a) What is the difference between discrete and continuous media data ?

    (b) Write down a deterministic QOS of distributed multimedia system.

    (c) What are the values that a 3 bit quantization results ?

    (d) What is the colour quantization ? Explain.

    (e) What is the difference between lossless and lossy processing ?

    (f) Define aspect ratio. What is the aspect ratio of NTSC standard ?

    (g) What is the difference between RGB and YUV ?

    (h) What is stereo effect ? Explain.

    (i) What is an interactive TV ?

    (j) What is the role of orchestration in Multimedia distributed processing model ?

2. (a) Explain the various layers in the Multimedia distributed processing model. 6

    (b) Using these layers in the multimedia distributed processing model, explain how a multimedia application works.   4

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3. (a) Explain the QOS layer architecture in the Multimedia distributed processing model. 7

   (b) Using these layers in the multimedia distributed processing model, explain how a multimedia application works. 3

4. (a) What is Nyquist principle ? If a standard CD has got sampling rate of 44100 Hz, then what is the maximum frequency that can be generated ? 5

   (b) What is the difference between audio and music ? How digital music is produced using a musical instrument synthesizer ? 5

5. (a) What is the storage capacity per image using a graphics card having a resolution of 640 × 480 pixels with simultaneous presentation of 4 colors ? 5

   (b) If 3 bytes per pixel is used to encode the luminance and chrominance components, what is the bandwidth requirement for transmitting a video having frame of 640 x 480 pixel over a communication channel ? 5

6. (a) What is a flicker ? How to avoid flicker in a TV ? Explain using an example. 5

   (b) Give an account of operating system support for continuous media applications. 5

7. (a) Give an account of multimedia information system. Explain how picture sharing can be done using a multimedia information system. 5

   (b) Give an account of Multimedia Communication System. Explain its various sub systems. 5

8. Write short notes on any **two** of the following : 5×2

   (a) MIDI protocol

   (b) DVI technology

   (c) Standards for multimedia systems.