

**Total number of printed pages – 3**      **B. Tech**  
**PECS 3411**

**Eighth Semester Examination – 2008**

**MULTIMEDIA TECHNOLOGIES**

**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
- (i) Distinguish between multimedia and hypermedia.
  - (ii) What is the range of audible frequency and human frequency ?
  - (iii) Give one example each of a lossless and a lossy compression technique.



- (iv) What is aspect ratio and how much it is for television, HDTV, motion picture.
- (v) Give a short note on DVI.
- (vi) What does the Quality of Service of a multimedia application mean ?
- (vii) What are different hypermedia message components ?
- (viii) Differentiate horizontal and vertical retrace.
- (ix) Explain I-frame, P-frame and B-frame.
- (x) What is delta modulation ?

2. Explain the multimedia system architecture.  
Discuss different applications of multimedia.

10

3. What do you mean by psychoacoustics ?  
Discuss about MPEG compression of audio.

10

4. What is use of chroma subsampling in digital video ?

Discuss the advantages and disadvantages of interlaced video.

10

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**Contd.**

5. What is MIDI ?  
How is a basic MIDI message structured ?  
In what ways can MIDI be used effectively in multimedia applications ? 10
6. Write about multimedia file systems.  
Discuss the synchronization issues in distributed multimedia. 10
7. Explain the organization of a multimedia database. 10
8. Write short notes on : 10
- (i) Luminance
  - (ii) Hue
  - (iii) Saturation
  - (iv) Chrominance.
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