

Multimedia Systems IT-603

Answer any five questions

Time: 3 hour

Full Marks: 70

1. (a) What is aliasing? How do you overcome the problem of Aliasing?
(b) A person wishes to record his voice for 50 second. Consider the sampling rate is 24 KH/ and 16 bit resolution. How much memory area is required to store his speech sound?
[6 i x]
2. (a) Explain the data structure used to store the k-dimensional point data in k-d tree? Explain with suitable example the construction of K-d tree.
(b) Discuss the advantages of Multimedia? [10 14]
3. (a) How is the point data stored in two dimensional spaces by using point-quadtree?
(b) Compare the MX quadtree with the point quadtree. [10 14 1]
4. (a) Where we should use the MIDI audio?
(b) Differentiate between MIDI and Digital audio.
(c) Discuss how an image is stored using "R- tree" data structure. [3 i 5 1 6 1]
5. (a) Define Image. What is storage image format and captured image format?
(b) Discuss the different method of transmission of image.
(c) What is luminance and chrominance? [4 1 4 1]
6. (a) Discuss about the different compression technique.
(b) Let us consider the probability of occurrence of few characters in a message is as follows: A (0.23), B (0.15), C (0.37), D (0.18), E (0.07). Now generate a variable length code for the above character set, and compare the gain with respect to ASCII code. ?
[6 i 8]
7. (a) Write down the basic steps of data compression technique.
(b) Write down the different steps of JPEG compression techniques
(c) Discuss about the different MPEG standards? [3 * 7 > 4]