MultiMedia System

1) Define Multimedia System. Explain different types of media used in multimedia.
2) Explain Main properties of Multimedia.
3) Explain the implementation areas of multimedia.
4) Describe the global ~~properties~~ structure of multimedia systems.
5) Explain different types of MIDI messages.
6) List out names and function of MIDI Software.
7) Explain various steps involved in sound generation and recognition.
8) State the Nyquist Sampling theorem for lossless digitization. Calculate the file size (in MB) for 10 seconds of stereo music sampled at CD-quality sampling rate having 8bit depth of 16 bits.
9) Explain the term speech. Explain the components of speech recognition and understanding.
10) What are the application areas of image processing? Explain.
11) With necessary diagrams explain how the sound is digitized and the sound is stored in a multimedia system.
12) What is speech analysis? What are the areas of research in speech analysis?
13) What is an image? List the different types of image formats with brief description.
14) How long will it take to transmit a minute long video of spatial resolution 1024 X 786, 24 bits per pixel & 30 frames per second through a communication link at a constant rate of 56 kbps.
15) Explain image recognition steps with suitable diagram.
16) Explain the principles of Animation.
17) How is source coding different from entropy encoding? Describe about JPEG compression (how it is achieved with diagram)
18) Explain the basic steps of animation? Describe the YUV model for video transmission.

19) How is progressiveness achieved in lossy DCT mode in JPEG? Explain the different image frames in MPEG.
20) What are the approaches that are used to transmit animation over computer network? Describe the graphical language with example.
21) Briefly explain the spatial filtering technique for image enhancement.
22) Describe the various methods for controlling animations.
23) List out the important measures for visual representation and explain each of the measures in brief.
24) What do you understand by term data compression? Write its advantage ~~over~~ in terms of multimedia computing. Differentiate between lossless & lossy compression technique.
25) What are bitmap images? Explain the advantages and disadvantages of bitmap over vector images.
26) Why do we need Huffman Coding? Explain it with suitable example.
27) What is Huffman Coding? Encode the Huffman code for the symbol P, Q, R, S, T, U, V with probabilities 0.4, 0.25, 0.13, 0.12, 0.05, 0.03, 0.02 respectively.
28) Explain the technique used by Huffman coding. Construct the Huffman coding for the following grey level & calculate the average length.

Grey level	0	1	2	3	4	5	6	7
No. of pixels	30	35	38	10	15	10	38	80

29) Explain DCT based JPEG image compression technique.
30) What are the difference between CD-ROM(XA) form 1 and CD-ROM(XA) form-2. Illustrates above with a block diagram.
31) List out the advantages & limitation of optical disks. Explain data storage mechanism in optical disk.
32) Explain the working principle of compact Disk-Magneto Optical (CD-MO).
33) Explain Mode 1 and Mode 2 CD-ROM structure with block. capacity & data rate.

34) Describe in brief about different layers in CD with suitable diagram. Also describe the audio data rate used in CD.

35) Mention the evolution of optical storage media in chronological order? Discuss about CIRC in short.

36) Explain the arithmetic encoding and decoding technique with suitable example.

37) Define real time system. Explain the characteristics of real time OS.

38) With suitable examples explain the EDF and RMA algorithm.

39) Explain various multimedia workstation? Explain hybrid approach.

40) What do you mean by Multimedia OS? Explain the design principles of QOS.

41) Define Hypermedia. Differentiate between ODA and SGML architecture.

42) What is the relationship between hypertext, hypermedia & multimedia? Explain in brief.

43) What are the different types of communication architecture used in multimedia systems? Describe them.

44) How can we present multimedia information in non-linear fashion? Explain MHEG with structure and class hierarchy.

45) What is the resource in terms of multimedia? What are the phases of the resource reservation & management process? Explain different ways of reserving the resources.

46) Explain the application subsystem of multimedia communication system.

47) Differentiate between ODA and MHEG with suitable block diagram.

48) Explain Open document Architecture (ODA).

49) Discuss the communication support model for group communication architecture.

50) Explain Document & its architecture with suitable Diagram

51) What are architectural subsystem of multimedia Communication System? Explain Quality of Service layered model in Multimedia Communication System.

52) What are the different types of communication architecture used in multimedia systems? Describe them.

53) What is multimedia & hypermedia Information Coding Expert Group Techniques? Explain different types of class defined by MHEG.

54) Write short notes on.

a) Animation Languages
b) USB
c) Run Length coding
d) CORBA
e) Multimedia Workstation
f) SGML
g) Image Enhancement
h) QoS parameters
i) Methods of controlling Animation
j) Dynamic in Graphics.
k) Color Encoding
l) Computer Video format
m) Data streams characteristic for continuous medium.
n) Lossless & Lossy compression
o) Real time scheduling system models.

<Some older questions will be discussed and given as your Assignments. All these questions will be tried to be solved in the class and as well as we will cover the course too ;)>

"REMEMBER YOU HAVE TO GO ONCE THROUGH PRESCRIBED SYLLABUS AND GAIN IDEA ABOUT THE COURSE."

"Also be Ready with one Tricky Question".

Thank You

Best of Luck !!