

Note: Answer all questions from Part–A and answer any **FIVE** questions from Part–B.

PART – A (25 Marks)

1. What is bit-depth and how is it related, if at all, to sampling rate?
2. A 15 inch monitor with an aspect ratio of 4 : 3 has a pixel addressability 800 X 600. Calculate its resolution.
3. What are true type fonts?
4. What are additive and subtractive models of color representation?
5. What is meant by saying that a sound has loudness of 60 dB?
6. Differentiate between cell animation and path animation.
7. What are levels and profiles in MPEG-2 video?
8. What are the different resolutions at which photos may be stored on a photo-CD?
9. Justify the statement : HyTime can be considered as an extension of SGML.
10. What is the difference between a story and a flow line?

PART – B (50 Marks)

- 11.a) What is meant by multimedia presentation? Describe some of its important characteristics.
b) Explain with a diagram the principles of pulse code modulation.
- 12.a) Explain how printer resolution is related to the scanner resolution and monitor resolution.
b) Explain how 3D objects can be created from 2D shapes using
i) lathing ii) extrusion iii) lofting
- 13.a) What are the basic components of an audio system? Describe their functions.
b) What is meant by chroma sub-sampling? Explain how does it help in bandwidth reduction.
- 14.a) A document contains letters A through F with frequencies as indicated :
A : 0.25, B : 0.1, C : 0.2, D : 0.15, E : 0.26, F : 0.04
Use Huffman coding to derive a codeword set.
b) Describe the functions of various components in Windows media framework.
- 15.a) "ODA speaks about the three representations of a document". Explain.
b) Discuss the different types of software required to run a VR application.
- 16.a) Distinguish between forward and inverse kinematics.
b) What are the main signals generated by the adapter card? How are these conveyed to the monitor?
17. Write short notes on :
a) Device independent color models b) Audio file formats c) VRML