



KINGS

COLLEGE OF ENGINEERING

DEPARTMENT OF INFORMATION TECHNOLOGY



QUESTION BANK

Subject Code: CS1354

Subject Name: Graphics and Multimedia

Year / Sem: IV / VII

UNIT- I

Part-A (2-MARKS)

1. Write any five input devices.
2. Explain the functionalities of light pen.
3. What is the use of Data Glove?
4. In which field Trackball and Joystick are widely used?
5. Write short notes on image scanners.
6. Write any four output devices.
7. What are the types of printer?
8. What are the operations involved in a 2D Transformation?
9. What is meant by scaling?
10. What is reflection?
11. Describe shearing.
12. What is the difference between Window and View port?
13. What is clipping?
14. What are the types of clipping?
15. Define clip window.
16. Explain about curve clipping.
17. What is the difference between text clipping and character clipping?

Part-B (16-MARKS)

1. Explain the basic concept of Midpoint ellipse algorithm. Derive the decision parameters for the algorithm and write down the algorithm steps.
2. Explain two dimensional Translation and Scaling with an example.
3. Obtain a transformation matrix for rotating an object about a specified pivot point.
4. Explain DDA line drawing algorithm.
5. Explain the steps in midpoint ellipse drawing algorithm.
6. What is polygon clipping? Explain Sutherland-Hodgeman algorithm for polygon clipping.
7. Explain about socket, connect, bind, listen and accept functions.
8. Consider a triangle ABC whose coordinates are A[4,1], B[5,2], C[4,3]
 - a. Reflect the given triangle about X axis. (4)
 - b. Reflect the given triangle about Y-axis. (4)
 - c. Reflect the given triangle about Y=X axis. (4)
 - d. Reflect the given triangle about X axis. (4)
9. Explain Sutherland Hodgeman polygon clipping algorithm. Explain the disadvantage of it and how to rectify this disadvantage.
10. Explain Two Dimensional Viewing.
11. Explain Bresenham's Line Drawing Algorithms.

UNIT- II

Part-A (2-MARKS)

1. What is Projection?
2. What are the types of projection?
3. What is parallel projection? Where it is used?
4. Explain about depth cueing.
5. What is surface rendering?
6. What are the categories of 2D object representation?
7. Write short notes on polygon meshes.
8. What are the types of quadric surfaces?
9. Define Spline.

10. Write any 2 properties of Bezier Curves.
11. Define 3D Translation.
12. What is Composite Transformation?
13. What are the types of parallel projection?
14. What is color model?
15. Define Chromaticity.
16. What is color Gamut?
17. Differentiate Shades, Tints and Tones.
18. What is animation?
19. What is Morphing?
20. Explain Kinematics.
21. Define Dynamics.

Part-B (16-MARKS)

1. Explain 3D basic transformation with an example.
2. Design a storyboard layout and accompanying key frames for an animation of a single polyhedron.
3. How to specify objects motion in an animation system.
4. Derive the 3D transformation matrix for rotation about
 - (i) an arbitrary axis (8)
 - (ii) an arbitrary plane (8)
5. Explain RGB, CMY, YIQ and YUV color models.
6. Brief about select function and shut down functions.
7. Explain the properties of B spline. How it is differ from Bezier?
8. How to represent an object on 3D scene?
9. Explain three dimensional geometric and modeling transformations.
10. Explain three dimensional Viewing and Functions.
11. Draw the CIE chromaticity diagram and explain.
12. Explain different types of color model in detail.

UNIT- III
Part-A (2-MARKS)

1. What is multimedia?
2. Describe about GIS.
3. What is fractal?
4. Write any two applications of multimedia.
5. Define Document Imaging.
6. What is the basic hardware devices needed for multimedia?
7. What is the software components needed to make multimedia effect?
8. How multimedia is used in Image Processing?
9. Write any 3 image animation packages.
10. What is image annotation?
11. How multimedia is used in Electronic messaging?
12. What is the use of audio and video indexing?
13. Draw the diagram for multimedia architecture.
14. Define ATM.
15. What is Hyper text?
16. Define HDTV and UDTV.
17. What is Holography?
18. What are the data objects used in a multimedia system?
19. Write down the video processing standard.
20. What type of software technology used for multimedia application?

Part-B (16-MARKS)

1. Explain list of Multimedia applications. Explain them briefly.
2. Briefly discuss the history and future of Multimedia.
3. Explain the characteristics of MDBMS.
4. Write short notes on multimedia system architecture.
5. What is multimedia? Explain the properties of multimedia systems.
6. Explain the data stream characteristics for continuous media.

7. Explain the different file formats used in multimedia.
8. Suggests with reasons 5 potential applications of multimedia other than the applications in the field of entertainment and education.
9. Explain various multimedia interface standards.
10. Describe various building block of multimedia system.
11. Write short notes on MDBMS.
12. Explain Database Organization for Multimedia Applications.
13. Explain 3-D Technology and Holography.
14. (i) Explain hypermedia and its functions. (8)
(ii) Short notes on Multimedia databases. (8)

UNIT- IV
Part-A (2-MARKS)

1. What is compression?
2. What are the types of compression?
3. Define Run-length encoding.
4. List out the characteristics of color.
5. List out the color models.
6. Where CMYK color model is used widely?
7. Define JPEG.
8. What are the components of JPEG?
9. What is quantization?
10. What are the levels of profiles used in MPEG standard?
11. Define Vector quantization.
12. Write short notes on audio compression.
13. Define TIFF.
14. What is the use of Tag in a file format?
15. List out the 3 types of chunks used in RIFF.
16. Explain about MIDI file format.
17. What are the layers used in TWAIN architecture?
18. What are the characteristics of voice recognition systems?

19. What is Phoneme? Explain its uses.
20. What is sampling?
21. Define sampling rate.
22. What is disk spanning?
23. Explain about caching.

Part-B (16-MARKS)

1. List the types of fixed and removable storage devices available for multimedia, and discuss the strength and weakness of each one.
2. Explain the data compression technique used in multimedia.
3. Define MIDI. List its attribute. Compare and contrast the use of MIDI and digitized audio in multimedia production.
4. List and explain important steps and considerations in recording and editing digital audio.
5. Describe the capabilities and limitations of bitmap images and vector images.
6. Define animation and describe how it can be used in multimedia.
7. Explain Color, Gray Scale and Still Video Image Compression method.
8. Explain data and file format standards.
9. Explain multimedia input and output Technologies.
10. Uses of magnetic Storage in Multimedia Systems.

UNIT- V

Part-A (2-MARKS)

1. Define authoring system.
2. What are the phases of authoring system?
3. What is hypermedia?
4. What are the types of multimedia authoring systems?
5. Write short notes on Telephone authoring systems.
6. List out the processes involved in the creation of should track.
7. What is premixing?

8. What are the user interface development tools?
9. Write down the 3 navigation modes.
10. What are the 4 metaphors used for multimedia applications?
11. Define Panning.
12. Specify the features of video playback.
13. Define Hypermedia Messaging.
14. Define Mobile Messaging.
15. Write short notes on Vendor Independent Messaging (VIM)
16. Write any 5 components of distributed multimedia system.
17. What are the database operations?
18. List out the types of multimedia server.
19. Write short notes on RAID.
20. What are the levels of RAID?
21. What is the difference between linking and embedding?

Part-B (16-MARKS)

1. Distinguish between multimedia system and hypermedia system.
2. (i) List the main attribute, benefits and drawbacks of 3 types of authoring systems.
(8)
(ii) Write short notes on following.
 - a. Mobile messaging. (4)
 - b. Document management. (4)
4. Explain time based and object oriented multimedia authoring tool.
5. What is editing features? Explain it briefly.
6. Briefly explain integrated document management in multimedia.
7. How to create hypermedia message? Give an example also explain hypermedia message components.
8. Explain Distributed multimedia systems.
9. Explain multimedia Authoring and User Interface design.