



KINGS



COLLEGE OF ENGINEERING
DEPARTMENT OF COMPUTER SCIENCE AND ENGG
QUESTION BANK

YEAR/ SEM : III/ VI

SUB. CODE : CS1354

SUBJECT NAME: GRAPHICS AND MULTIMEDIA

UNIT- I OUTPUT PRIMITIVES

Part-A (2-MARKS)

1. What is the purpose of presentation graphics?
2. Define refresh buffer/frame buffer.
3. What is pixel?
4. Define aspect ratio.
5. What is Output Primitive?
6. What is DDA?
7. What are the disadvantages of DDA algorithm?
8. What is attribute parameter?
9. What is the basic line attributes?
10. What is meant by aliasing?
11. Define Translation.
12. Define Rotation.
14. Define Reflection.
15. Define Shear.
16. Define Window.
17. Define view port.
18. What is viewing transformation?
19. Define Clipping.
20. What are the types of 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. (16)
2. Explain two dimensional Translation and Scaling with an example. (16)
3. Obtain a transformation matrix for rotating an object about a specified pivot point. (16)
4. Explain DDA line drawing algorithm. (16)
5. Explain the steps in midpoint ellipse drawing algorithm. (16)
6. What is polygon clipping? Explain Sutherland-Hodgeman algorithm for polygon (16)
7. Explain about socket, connect, bind, listen and accept functions. (16)
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. (16)
10. Explain Two Dimensional Viewing. (16)
11. Explain Bresenham's Line Drawing Algorithms.

UNIT- II THREE DIMENSIONAL CONCEPTS**Part-A (2-MARKS)**

1. Categorize the 3D representations?
2. What Boundary representation?
3. What space-partitioning representation?
4. What is Blobby Object?
5. What is projection?
6. What are the types of projection?
7. What is parallel projection?
8. What is Perspective projection?
9. What is chromaticity?
10. Define Color model.

11. What are the uses of chromaticity diagram?
12. What is HSV model?
13. what for CMY color model used?
14. What are the parameters in the HLS color model?
15. Define Computer animation.
16. What are the steps in animation sequence?
17. How frame-by-frame animation works?
18. What is morphing?
19. What are the methods of motion specifications?

Part-B (16-MARKS)

1. Explain 3D basic transformation with an example. (16)
2. Design a storyboard layout and accompanying key frames for an animation (16)
3. How to specify objects motion in an animation system. (16)
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. (16)
6. Brief about select function and shut down functions. (16)
7. Explain the properties of B spline. How it is differ from Bezier? (16)
8. How to represent an object on 3D scene? (16)
9. Explain three dimensional geometric and modeling transformations. (16)
10. Explain three dimensional Viewing and Functions. (16)
11. Draw the CIE chromaticity diagram and explain. (16)
12. Explain different types of color model in detail. (16)

UNIT- III MULTIMEDIA SYSTEM DESIGN

Part-A (2-MARKS)

1. Give some Multimedia applications.
2. What are the multimedia elements?
3. What is Holography?

4. What is hologram?
5. What are the important processes in image processing?
6. What are complex image enhancement capabilities?
7. What is VGA mixing?
8. What is Dual-buffered VGA mixing / scaling?
9. What are hypermedia documents?
10. What are the sub-systems in DSP?
11. What are the types of images based on multimedia?
12. What does non-visible images refer?
13. What are abstract images?
14. What is DVI?
15. What is MIDI?
16. What is Apple's Quick time?
17. What is JPEG?
18. What is called Asymmetrical compression based on Compression?
19. What are the considerations in Multimedia storage?
20. What are the strengths of object oriented s/w?

Part-B (16-MARKS)

1. Explain list of Multimedia applications. Explain them briefly. (16)
2. Briefly discuss the history and future of Multimedia. (16)
3. Explain the characteristics of MDBMS. (16)
4. Write short notes on multimedia system architecture. (16)
5. What is multimedia? Explain the properties of multimedia systems. (16)
6. Explain the data stream characteristics for continuous media. (16)
7. Explain the different file formats used in multimedia. (16)
8. Suggests with reasons 5 potential applications of multimedia other than the applications in the field of entertainment and education. (16)
9. Explain various multimedia interface standards. (16)
10. Describe various building block of multimedia system. (16)
11. Write short notes on MDBMS. (16)
12. Explain Database Organization for Multimedia Applications. (16)

13. Explain 3-D Technology and Holography. (16)
14. (i) Explain hypermedia and its functions. (8)
- (ii) Short notes on Multimedia databases. (8)

UNIT- IV MULTIMEDIA FILE HANDLING

Part-A (2-MARKS)

1. Define Cadence.
2. Say some loss less compression standards?
3. Say some loss compression standards?
4. What are the advantages of CCITT Group 3 1D?
5. What is the disadvantage of CCITT Group 3 2D Scheme?
6. What is Luminance?
7. What are the levels of definition in JPEG standards?
8. Define Quantization.
9. What are the controls in VCR paradigm?
10. What are types of moving picture?
11. What are the factors that affect video performance?
12. What is fractal?
13. What are multimedia file formats?
14. What is digital pen?
15. What are the components of PEN?
16. What are the display performance issues?
17. What is roping?
18. Write the four basic technologies used for flat panel displays.
19. What are the components of Laser printer?
20. What are the main characteristics of voice recognition system?

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. (16)
2. Explain the data compression technique used in multimedia. (16)

3. Define MIDI. List its attribute. Compare and contrast the use of MIDI and digitized audio in multimedia production. (16)
4. List and explain important steps and considerations in recording and editing digital audio. (16)
5. Describe the capabilities and limitations of bitmap images and vector images. (16)
6. Define animation and describe how it can be used in multimedia. (16)
7. Explain Color, Gray Scale and Still Video Image Compression method. (16)
8. Explain data and file format standards. (16)
9. Explain multimedia input and output Technologies. (16)
10. Uses of magnetic Storage in Multimedia Systems. (16)

UNIT- V HYPERMEDIA

Part-A (2-MARKS)

1. What are the design issues for multimedia authoring?
2. What are the types of Multimedia authoring Systems?
3. Classify the User interface development tools?
4. What is the purpose of zooming?
5. What is panning?
6. What are the steps needed for Hypermedia report generation?
7. Define mail message.
8. What are the components of a distributed Multimedia system?
9. What are the characteristics of Document store?
10. What are key issues in data organization for multimedia systems?
11. What are the key elements in object server architecture of multimedia applications?
12. What are the functions performed by object request broker?
13. What are the issues in database replication techniques?
14. What are the types of database replication?
15. What is the primary n/w topologies used for multimedia?
16. Give the primary goal of MAPI.
17. What is the purpose of MIME?
18. What are the characteristics of image and still video stores?
19. What are the services provided by a directory service agent?

20. What are the services provided by User Interface Agent?

Part-B (16-MARKS)

1. Distinguish between multimedia system and hypermedia system. (16)
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. (16)
5. What is editing features? Explain it briefly. (16)
6. Briefly explain integrated document management in multimedia. (16)
7. How to create hypermedia message? Give an example also explain hypermedia Message components. (16)
8. Explain Distributed multimedia systems . (16)
9. Explain multimedia Authoring and User Interface design. (16)