Code No: RR221402 | RR | SET-1

B.Tech II Year - II Semester Examinations, April/May-2012
COMPUTER GRAPHICS
(MECHANICAL ENGINEERING (MECHATRONICS))

Time: 3 hours **Max. Marks: 80**

Answer any five questions
All questions carry equal marks

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1. Give a brief note about
   i) Frame buffer
   ii) Aliasing Problem
   iii) Graphical primitive functions. [16]

2.a) Explain the steps involved in Bresenham algorithm for line generation.
b) What is display file? What is its role in graphical image display? [16]

3.a) List the matrices for following transformation techniques
i) scaling ii) rotation iii) mirror reflection in 2-D.
b) Derive the transformation matrix to magnify the triangle about vertex A, where the triangle is define by A(3,5), B(10,20) and C(15,5). [16]

4.a) What is meant by normalized device coordinate system. What are the steps involved in it.
b) Explain the steps involved in scanline polygon filling algorithm. [16]

5.a) What is the significance of segment table. What are the operations on segment table?
b) Distinguish between window and view port. [16]

6.a) Explain the step – wise procedure for Cohen – Sutherland algorithm.
b) Explain with an example, how the above clipping algorithm works. [16]

7.a) What are the properties of perspective projections.
b) Explain the steps in Panter's algorithm. What are its advantages and disadvantages? [16]

8.a) Explain how curve generation is different from surface generation.
b) Explain the steps involved in Bezier method. [16]

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Code No: RR221402 | RR | SET-2

B.Tech II Year - II Semester Examinations, April/May-2012
COMPUTER GRAPHICS
(MECHANICAL ENGINEERING (MECHATRONICS))

Time: 3 hours **Max. Marks: 80**

Answer any five questions
All questions carry equal marks

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1.a) List the matrices for following transformation techniques
i) scaling ii) rotation iii) mirror reflection in 2-D.
b) Derive the transformation matrix to magnify the triangle about vertex A, where the triangle is define by A(3,5), B(10,20) and C(15,5). [16]

2.a) What is meant by normalized device coordinate system. What are the steps involved in it.
b) Explain the steps involved in scanline polygon filling algorithm. [16]

3.a) What is the significance of segment table. What are the operations on segment table?
b) Distinguish between window and view port. [16]

4.a) Explain the step – wise procedure for Cohen – Sutherland algorithm.
b) Explain with an example, how the above clipping algorithm works. [16]

5.a) What are the properties of perspective projections.
b) Explain the steps in Panter's algorithm. What are its advantages and disadvantages? [16]

6.a) Explain how curve generation is different from surface generation.
b) Explain the steps involved in Bezier method. [16]

7. Give a brief note about
i) Frame buffer
ii) Aliasing Problem
iii) Graphical primitive functions. [16]

8.a) Explain the steps involved in Bresenham algorithm for line generation.
b) What is display file? What is its role in graphical image display? [16]

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Code No: RR221402 | RR | SET-3

B.Tech II Year - II Semester Examinations, April/May-2012
COMPUTER GRAPHICS
(MECHANICAL ENGINEERING (MECHATRONICS))

Time: 3 hours **Max. Marks: 80**

Answer any five questions
All questions carry equal marks

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1.a) What is the significance of segment table. What are the operations on segment table?
b) Distinguish between window and view port. [16]

2.a) Explain the step – wise procedure for Cohen – Sutherland algorithm.
b) Explain with an example, how the above clipping algorithm works. [16]

3.a) What are the properties of perspective projections.
b) Explain the steps in Panter's algorithm. What are its advantages and disadvantages? [16]

4.a) Explain how curve generation is different from surface generation.
b) Explain the steps involved in Bezier method. [16]

5. Give a brief note about
i) Frame buffer
ii) Aliasing Problem
iii) Graphical primitive functions. [16]

6.a) Explain the steps involved in Bresenham algorithm for line generation.
b) What is display file? What is its role in graphical image display? [16]

7.a) List the matrices for following transformation techniques
i) scaling ii) rotation iii) mirror reflection in 2-D.
b) Derive the transformation matrix to magnify the triangle about vertex A, where the triangle is define by A(3,5), B(10,20) and C(15,5). [16]

8.a) What is meant by normalized device coordinate system. What are the steps involved in it.
b) Explain the steps involved in scanline polygon filling algorithm. [16]

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Code No: RR221402 | RR | SET-4

B.Tech II Year - II Semester Examinations, April/May-2012
COMPUTER GRAPHICS
(MECHANICAL ENGINEERING (MECHATRONICS))

Time: 3 hours **Max. Marks: 80**

Answer any five questions
All questions carry equal marks

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1.a) What are the properties of perspective projections.
b) Explain the steps in Panter's algorithm. What are its advantages and disadvantages? [16]

2.a) Explain how curve generation is different from surface generation.
b) Explain the steps involved in Bezier method. [16]

3. Give a brief note about
i) Frame buffer
ii) Aliasing Problem
iii) Graphical primitive functions. [16]

4.a) Explain the steps involved in Bresenham algorithm for line generation.
b) What is display file? What is its role in graphical image display? [16]

5.a) List the matrices for following transformation techniques
i) scaling ii) rotation iii) mirror reflection in 2-D.
b) Derive the transformation matrix to magnify the triangle about vertex A, where the triangle is define by A(3,5), B(10,20) and C(15,5). [16]

6.a) What is meant by normalized device coordinate system. What are the steps involved in it.
b) Explain the steps involved in scanline polygon filling algorithm. [16]

7.a) What is the significance of segment table. What are the operations on segment table?
b) Distinguish between window and view port. [16]

8.a) Explain the step – wise procedure for Cohen – Sutherland algorithm.
b) Explain with an example, how the above clipping algorithm works. [16]

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