

Name:

Enrolment No:



UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, December 2020

Course: Computer Graphics

Program: B.Tech. CS-MOB

Course Code: CSEG 3003

Semester: VIth

Time : 02 hrs.

Max. Marks: 100

Instructions:



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Tests, Surveys and Pools Tests Test Canvas : END TERM EXAM 2020

Edit Mode is: ON ?

This Test has 13 attempts. For information on editing questions, click **More Help** below.

Test Canvas: END TERM EXAM 2020

The Test Canvas lets you add, edit and reorder questions, as well as review a test. [More Help](#)

Question Settings

You can edit, delete or change the point values of test questions on this page. If necessary, test attempts will be regraded after you submit your changes.

Description	1. Total no. of questions=40. 2. Three questions carry 1 marks, Thirty questions carry 2 marks, Five question carry 5 marks and One question carry 10 marks.
Instructions	1. Attempt all Questions. 2. No negative marking.
Total Questions	40
Total Points	100
Number of Attempts	13

Select: [All](#) [None](#) | Select by Type: - Question Type - v

Delete and Regrade

Points

Update and Regrade

Hide Question Details

1. Multiple Choice: Q1.: Types of computer graphics are.....

Points: 1

Question	Types of computer graphics are.....
Answer	<input checked="" type="checkbox"/> a. Vector and raster <input type="checkbox"/> b. Scalar and raster <input type="checkbox"/> c. Vector and scalar <input type="checkbox"/> d. None of these

2. Multiple Choice: Q2.: "Higher the number of pixels,.....

Points: 1

Question	"Higher the number of pixels,..... The image quality."
Answer	<input type="checkbox"/> a. Bad <input checked="" type="checkbox"/> b. Better <input type="checkbox"/> c. Smaller <input type="checkbox"/> d. None of above

3. Multiple Choice: Q3.: Random scan systems are designed for ...

Points: 1

Question	Random scan systems are designed for
Answer	<input checked="" type="checkbox"/> a. Line drawing application

- b. Pixel drawing application
- c. Color drawing application
- d. None of these

4. Multiple Choice: Q4.: How many types of polygon filling /*...

Points: 2

Question	How many types of polygon filling
Answer	<ul style="list-style-type: none">a. Twob. One<input checked="" type="checkbox"/> c. Threed. Four

5. Multiple Choice: Q5.: The algorithm used for filling the in...

Points: 2

Question	The algorithm used for filling the interior of a polygon is called
Answer	<ul style="list-style-type: none"><input checked="" type="checkbox"/> a. Flood fill algorithmb. Boundary fill algorithmc. Scan line polygon fill algorithmd. None of these

6. Multiple Choice: Q6.: The function of scan line polygon fil...

Points: 2

Question	The function of scan line polygon fill algorithm are
Answer	<ul style="list-style-type: none"><input checked="" type="checkbox"/> a. Find intersection point of the boundary of polygon and scan lineb. Find intersection point of the boundary of polygon and pointc. Both a & bd. None of these

7. Multiple Choice: Q7.: If the pixel is already filled with d...

Points: 2

Question	If the pixel is already filled with desired color then leaves it otherwise fills it.this is called
Answer	<ul style="list-style-type: none">a. Flood fill algorithm<input checked="" type="checkbox"/> b. Boundary fill algorithmc. Scan line polygon fill algorithmd. None of these

8. Multiple Choice: Q8.: Bresenham circle algorithm uses the a...

Points: 2

Question	Bresenham circle algorithm uses the approach of
Answer	<input checked="" type="checkbox"/> a. Midpoint <input type="checkbox"/> b. Point <input type="checkbox"/> c. Line <input type="checkbox"/> d. None of these

 9. Multiple Choice: Q9.: "In line clipping, the portion of lin...

Points: 2

Question	"In line clipping, the portion of line which is Of window is cut and the portion that is the window is kept."
Answer	<input checked="" type="checkbox"/> a. "outside, inside" <input type="checkbox"/> b. "inside, outside" <input type="checkbox"/> c. "exact copy, different " <input type="checkbox"/> d. "different, an exact copy"

 10. Multiple Choice: Q10.: Is a basic approach used ...

Points: 2

Question Is a basic approach used to fill the polygon.
Answer	<input type="checkbox"/> a. seed fill <input type="checkbox"/> b. scan fill <input checked="" type="checkbox"/> c. A and B <input type="checkbox"/> d. None fo these

 11. Multiple Choice: Q11.: The process of selecting and viewing ...

Points: 2

Question	The process of selecting and viewing the picture with different views is called
Answer	<input type="checkbox"/> a. Clipping <input checked="" type="checkbox"/> b. Windowing <input type="checkbox"/> c. Segmenting <input type="checkbox"/> d. All of above

 12. Multiple Choice: Q12.: Mapping the world co-ordinates into p...

Points: 2

Question	Mapping the world co-ordinates into physical device co-ordinates is called
Answer	<input type="checkbox"/> a. translation <input type="checkbox"/> b. homogeneous transformation <input type="checkbox"/> c. co-ordinate conversion

d. Viewing transformation

13. Multiple Choice: Q13.: "In Cohen- Sutherland subdivision lin...

Points: 2

Question	"In Cohen- Sutherland subdivision line clipping algorithm, bit 3 in region code is set if"
Answer	<p>a. end point of line is to the left of the window</p> <p>b. end point of line is to the right of the window</p> <p><input checked="" type="checkbox"/> c. end point of line is to the below of the window</p> <p>d. end point of line is to the above of the window</p>

14. Multiple Choice: Q14.: "In sutherland - Hodgeman polygon cli...

Points: 2

Question	"In sutherland - Hodgeman polygon clipping algorithm, if both vertices of the edge are outside the window boundaryIs added to the output vertex list."
Answer	<p>first vertex</p> <p>Second vertex</p> <p>the intesection point of the polygon edge with the window boundary.</p> <p><input checked="" type="checkbox"/> None of these.</p>

15. Multiple Choice: Q15.: The slope of the Bezier curve at star...

Points: 2

Question	The slope of the Bezier curve at start of the curve of is controlled by
Answer	<p>a. First control point</p> <p><input checked="" type="checkbox"/> b. First two control points</p> <p>c. First three control points</p> <p>d. All four control points</p>

16. Multiple Choice: Q16.: Z-buffer algorithm is used for /**/ ...

Points: 2

Question	Z-buffer algorithm is used for
Answer	<p>a. Frame buffer removal</p> <p><input checked="" type="checkbox"/> b. Hidden line removal</p> <p>c. Rendering</p> <p>d. Animation</p>

17. Multiple Choice: Q17.: A line wirh end point codes as 0000 a...

Points: 2

Question	A line wirh end point codes as 0000 and 0000 is
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Answer	a. partially invisible
	<input checked="" type="checkbox"/> b. completely visible
	c. trivially visible
	d. completely invisible

18. Multiple Choice: Q18.: What is name of temporary memory wher...

Points: 2

Question	What is name of temporary memory where the graphics data is stored to be displayed on screen
Answer	a. RAM
	b. ROM
	<input checked="" type="checkbox"/> c. Frame buffer
	d. None

19. Multiple Choice: Q19.: The algorithm of hidden surface are ...

Points: 2

Question	The algorithm of hidden surface are
Answer	a. Object-space method
	b. Image-space method
	<input checked="" type="checkbox"/> c. Both a & b
	d. None of these

20. Multiple Choice: Q20.: The types of hidden surface removal a...

Points: 2

Question	The types of hidden surface removal algorithm are document.oncopy = new Function("return false"); document.onpaste = new Function("return false"); document.onselectstart = new Function("return false"); document.oncontextmenu = new Function ("return false");
Answer	a. "Depth comparison, Z-buffer, back-face removal"
	b. "Scan line algorithm, priority algorithm"
	c. "BSP method, area subdivision method"
	<input checked="" type="checkbox"/> d. All of these

21. Multiple Choice: Q21.: The Bezier curve obtained from the fo...

Points: 2

Question	The Bezier curve obtained from the four control points is called a
Answer	a. Square Bezier curve
	<input checked="" type="checkbox"/> b. Cubic Bezier curve
	c. Hectare Bezier curve
	d. Rectangle Bezier curve

22. Multiple Choice: Q22.: A Shading Model /**/ document.oncop...

Points: 2

Question	A Shading Model
Answer	<input checked="" type="checkbox"/> a. is used to calculate the intensity of light that we should see at a given point on the surface of an object. <input type="checkbox"/> b. uses the intensity calculations to determine the light intensity. <input type="checkbox"/> c. scattered light from a rough surface <input type="checkbox"/> d. light source creating highlights on bright spots

23. Multiple Choice: Q23.: If (x,y,w) , $w=0$, is a point in the ho...

Points: 2

Question	If (x,y,w) , $w=0$, is a point in the homogeneous coordinate system than its equivalent in the two dimensional system is
Answer	<input type="checkbox"/> a. " $(x,y,1)$ " <input type="checkbox"/> b. " $(x,y,0)$ " <input checked="" type="checkbox"/> c. " $(x/w, y/w)$ " <input type="checkbox"/> d. " $(x,y,x-y)$ "

24. Multiple Choice: Q24.: "In which of the following shading mo..."

Points: 2

Question	"In which of the following shading models of polygons, the interpolation of intensity values is done along the scan line?"
Answer	<input checked="" type="checkbox"/> a. Gouraud Shading <input type="checkbox"/> b. Phong shading <input type="checkbox"/> c. Constant shading <input type="checkbox"/> d. Flat shading

25. Multiple Choice: Q25.: Which of the following is not an illu...

Points: 2

Question	Which of the following is not an illumination model.
Answer	<input type="checkbox"/> a. Constant Intensity Shading <input type="checkbox"/> b. Gouraud shading <input type="checkbox"/> c. Phong shading <input checked="" type="checkbox"/> d. Warn model

26. Multiple Choice: Q26.: Which shading is accurate and slow wh...

Points: 2

Question	Which shading is accurate and slow when interpolates the
Answer	<input type="checkbox"/> a. Constant Intensity Shading

- b. Gouraud shading
- c. Phong shading
- d. Warn model

27. Multiple Choice: Q27.: A flat and simple method for renderin...

Points: 2

Question A flat and simple method for rendering an object with polygon surface.

- Answer
- a. Flat shading
 - b. Gouraud shading
 - c. Phong shading
 - d. Fast Fong shading

28. Multiple Choice: Q28.: Disadvantages of Bezier curves are /...

Points: 2

Question Disadvantages of Bezier curves are

- Answer
- a. The degree of the Bezier curve depends on the number of control points.
 - b. The Bezier curve lacks control point.
 - c. "Points have ""influence"" over the course of the line"
 - d. The first and last control points are interpolated.

29. Multiple Choice: Q29.: Which line algorithms are identical ...

Points: 2

Question Which line algorithms are identical

- Answer
- a. DDA & Bresenham's
 - b. Bresenham's & midpoint
 - c. DDA & midpoint
 - d. None of above

30. Multiple Choice: Q30.: Composite transformation are formed a...

Points: 2

Question Composite transformation are formed as

- Answer
- a. Addition of any combination of translation. Scaling & rotation matrix
 - b. Multiplication of any combination of translation. Scaling & rotation matrix
 - c. Both a & b
 - d. Multiplication of any combination of scaling

31. Multiple Choice: Q31.: "What will be the value of initial de..."

Points: 2

Question	"What will be the value of initial decision parameter if we intend to draw a line between A(3,6) and B(4,9) using Bresenham's algorithm?"
Answer	<p>a. 6</p> <p><input checked="" type="checkbox"/> b. 5</p> <p>c. 3</p> <p>d. None of these</p>

32. Multiple Choice: Q32.: "Given a square with coordinate point..."

Points: 5

Question	"Given a square with coordinate points A(0, 3), B(3, 3), C(3, 0), D(0, 0). Apply the translation with distance 1 towards X axis and 1 towards Y axis. Obtain the new coordinates of the square."
Answer	<p>a. "A (2, 4), B(3, 4), C(1, 1), D(1, 2)."</p> <p><input checked="" type="checkbox"/> b. "A (1, 4), B(4, 4), C(4, 1), D(1, 1)."</p> <p>c. "A (4, 4), B(4, 4), C(1, 1), D(2, 1)."</p> <p>d. "A (1, 4), B(3, 4), C(2, 1), D(1, 1)."</p>

33. Multiple Choice: Q33.: "A Point has coordinates P (2, 3, 4) ..."

Points: 5

Question	"A Point has coordinates P (2, 3, 4) in x, y, z-direction. The Rotation angle is 90 degrees. Apply the rotation in x, y, z direction, and find out the new coordinates of the point?"
Answer	<p><input checked="" type="checkbox"/> a. "(3,2,4)"</p> <p>b. "(2,2,4)"</p> <p>c. "(1,2,3)"</p> <p>d. "(1,6,7)"</p>

34. Multiple Choice: Q34.: "Suppose a B´ezier curve C(u) is defi..."

Points: 5

Question	"Suppose a B´ezier curve C(u) is defined by the following four control points in the xy-plane: P0 =(2, 0), P1 = (2, 4), P2 = (2, 4) and P3 = (2, 0). What is the degree of C(u)?"
Answer	<p>a. 4</p> <p><input checked="" type="checkbox"/> b. 3</p> <p>c. 2</p> <p>d. 1</p>

35. Multiple Choice: Q35.: The Liang-Barsk...

Points: 10

Question	
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The Liang-Barsky line clipping algorithm uses the parametric equation of a line from (x_1, y_1) to (x_2, y_2) along with its infinite extension which is given as :

$$x = x_1 + \Delta x \cdot u$$

$$y = y_1 + \Delta y \cdot u$$

Where $\Delta x = x_2 - x_1$, $\Delta y = y_2 - y_1$, and u is the parameter with $0 \leq u \leq 1$. A line AB with end points A(-1,7) and B(11,1) is to be clipped against a rectangular window with $x_{min}=1$, $x_{max}=9$, $y_{min}=2$, and $y_{max}=8$. The lower and upper bound values of the parameter u for the clipped line using Liang-Barsky algorithm is given as :

- Answer
- a. (0,2/3)
- b. (1/6,5/6)
- c. (0,1/3)
- d. (0,1)

36. Multiple Choice: Q36.: Given a circle C with radius 10 and c...

Points: 5

Question	Given a circle C with radius 10 and center coordinates (1, 4). Apply the translation with distance 5 towards X axis and 1 towards Y axis. Obtain the new coordinates of C without changing its radius.
Answer	<p><input checked="" type="checkbox"/> a. (6,5)</p> <p>b. (4,3)</p> <p>c. (5,6)</p> <p>d. (4,4)</p>

37. Multiple Choice: Q37.: Given a 3D triangle with points (0, 0...

Points: 5

Question	Given a 3D triangle with points (0, 0, 0), (1, 1, 2) and (1, 1, 3). Apply shear parameter 2 on X axis, 2 on Y axis and 3 on Z axis and find out the new coordinates of the object.
Answer	<p>a. A (0, 0, 0), B(5, 4, 2), C(5, 6, 3).</p> <p>b. A (0, 0, 0), B(3, 4, 2), C(6, 7, 2).</p> <p>c. A (1, 0, 0), B(2, 5, 2), C(7, 6, 3).</p> <p><input checked="" type="checkbox"/> d. A (0, 0, 0), B(5, 5, 2), C(7, 7, 3).</p>

38. Multiple Choice: Q38.: Liang Barsky algorithm uses the ...

Points: 2

Question	Liang Barsky algorithm uses the equations for a line and solves four inequalities.
Answer	<p>a. linear</p> <p>b. Quadratic</p> <p>c. Cubic</p> <p><input checked="" type="checkbox"/> d. Parametric</p>

39. Multiple Choice: Q39.: Which type of arithmetic is used in Liang Barsky algorithm?

Points: 2

Question	Which type of arithmetic is used in Liang Barsky algorithm?
Answer	<p>a. simple arithmetic operations</p> <p><input checked="" type="checkbox"/> b. floating point arithmetic</p> <p>c. fixed point arithmetic</p> <p>d. logarithmic operations</p>

40. Multiple Choice: Q40.: Which transformation distorts the shape of an object such that the transformed shape appears as if the object were composed of internal layers that had been caused to slide over each other?

Points: 2

Question	Which transformation distorts the shape of an object such that the transformed shape appears as if the object were composed of internal layers that had been caused to slide over each other?
Answer	<p>a. Rotation</p> <p>b. Scaling up</p> <p>c. Scaling down</p> <p><input checked="" type="checkbox"/> d. Shearing</p>

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