Seat No. _____

MSC_CA_IT (sem-6) Examination
July-2021
CCCS621 : Web_Aplication_development_using_PHP

Time : Hours **Total Marks : 100**

Q-1(A) Answer the following Questions. **10**

1 If the state of the database no longer reflects a real state of the world that the database is supposed to capture, then such a state is called

2 How many 9 letter words can be formed that contain 3,4 or 5 vowels allowing repetition oflefters?

3 (ii) Visible surface detection

4 Prove that PH Q and (P --7 Q) / (Q --7 P) are equivalent.

5 The relationship between DEPARTMENT and EMPLOYEE is a

Q-1(B) Answer the following Questions. **10**

1 explain non zero widing rule for inside outside point if polygon.

2 Write short notes on Weiler-Atherton Polygon Clipping.

Q-2(A) Answer the following Questions. **9**

1 Explain briefly Real-time scheduling.

2 Explain the different network management tools.

3 Write two dimensional transformation for translation, rotation and scaling in

Q-2(B) Answer the following Questions. **11**

1 Write mid-point algorithm for drawing a circle.

2 Let G = (V, E) be a graph, where V= {a,. b, c, d, e},

3 Show that rotation (in 2-D) about the origin can be done by three shear transformations.

4 Write mid-point algorithm for drawing an ellipse.

5 Write the evolution of Microcontrollers.

6 explain Multiple processor scheduling

7 Mention and draw the Register Organisation of 8086.

8 Construct a minimal switching circuit for the boolean expression.

9 Explain about Bezier Curves.

10 A type of query that is placed within a WHERE or HAVING clause of another query is called

11 Write transformation matrices in 2-D for translation and scaling with respect to origin.

Q-3(A) Answer the following Questions. **10**

1 Explain the steps used to 0btain transforr.1ation matrix for rotation about an arbitrary axis in 3-D.

2 Which of the following is the oldest database model?

3 What is Q, when S = 1 and R = 1 for SR flip-flop?

4 Explain Cocomo Model in brief.

5 Define Euler and Hamiltonian paths.

Q-3(B) Answer the following Questions. **10**

1 Explain the method of obtaining transformation matrix for rotation about an arbitrary 3D.

2 Write about modelling coordinates, world coordinates, device coordinates and normalized device coordinates.

Q-4(A) Answer the following Questions. **9**

1 Explain Weiler Aytherton polygon clipping.

2 Explain Text clipping.

3 Explain briefly the revocation of access rights.

Q-4(B) Answer the following Questions. **11**

1 Prove that every connected graph has at least one spanning tree.

2 Y f Show that p v (q / r) is equivalent to (p v -q) v - r. Or

3 Write the evolution of Microprocessors.

4 Write about world coordinates, screen coordinates and normalized device coordinates.

5 Explain briefly the contiguous allocation.

6 Explain Sutherland-Hodgeman Polygon Clipping and a note on Weike-Atherton polygon clipping.

7 Draw the block diagrams of 16-bit and 32-bit Microcontrollers and compare.

8 Derive the matrix for rotation about an arbitary point in 2-D.

9 Write about plane equation.

10 What are necessary conditions for deadlocks ?

11 Draw the Timing diagrams for Memory, write operation of 8085 and explain.

Q-5(A) Answer the following Questions. **10**

1 Define shear transformation. Write transfonnation matrices for x-shear and y-shear about the line y = 0 and x = 0 respectively.

2 The one major advantage of CMOS is its

3 The sum of -6 and -13 using 2's complement addition is,

4 A schedule where the operations of each transaction are executed consecutively without any other interference from other transactions is called

5 A collection of data designed to be used by different people is called a/an

Q-5(B) Answer the following Questions. **10**

1 Mention different groups of instruction set of 8086 and explain Data transfer group of instructions with suitable examples.

2 Discuss briefly about issues in distributed system.

3 Write about back-face detection.

4 Explain the De Morgan theorems.

5 The entity integrity rule states that

6 Explain about parallel and perspective projections and derive transformation matrix for oblique parallel projection.

7 List some applications appropriate for each of the display Technology.

8 Write about flood-fill algorithm.

9 Which of the following hashing techniques does allow a hash file to expand and shrink its number of buckets dynamically without needing a directory?

10 Explain Liang-Barsky Line Clipping method . ./ OR