

24-04-2023

Reg. No.

Question Paper Code

11796

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2023

Sixth Semester

Computer Science and Engineering

(Common to Information Technology)

CS8092 – COMPUTER GRAPHICS AND MULTIMEDIA

(Regulations 2017)

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

- |   | <i>Marks,<br/>K-Level, CO</i> |
|---|-------------------------------|
| 1. Define Aspect Ratio.   | 2,K1,CO1                      |
| 2. Differentiate aliasing from antialiasing.                    | 2,K2,CO1                      |
| 3. What is composite transformation?                            | 2,K1,CO2                      |
| 4. List the different types of text clipping methods available. | 2,K2,CO2                      |
| 5. How will you represent a sphere in three dimensions?         | 2,K2,CO3                      |
| 6. Differentiate oblique and orthogonal projection.             | 2,K2,CO3                      |
| 7. Give two examples of lossless compression technique.         | 2,K2,CO4                      |
| 8. Write down the TIFF file format specification.               | 2,K1,CO4                      |
| 9. Define large-capacity file system.                           | 2,K1,CO5                      |
| 10. Write a short note on Blender Graphics.                     | 2,K1,CO5                      |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

- |  |           |
|--|-----------|
| 11. a) Explain RGB, YIQ and HSV color models.  | 13,K2,CO1 |
| <b>OR</b>  |           |
| b) Illustrate the basic illumination model in detail.  | 13,K2,CO1 |
| 12. a) Explain in detail the basic two-dimensional geometric transformations.                                    | 13,K2,CO2 |
| <b>OR</b>  |           |
| b) Discuss in detail about window to viewport coordinate transformation.   | 13,K2,CO2 |
| 13. a) Construct the Bezier curves of order 3 and with 4 polygon vertices A(1, 1), B(2, 3), C(4, 3) and D(6, 4). | 13,K3,CO3 |

**OR**

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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- b) (i) Explain Cohen-Sutherland line clipping with example. 7,K2,CO3  
(ii) Summarize the notes on clipping against rectangular boundaries. 6,K2,CO3

14. a) What are the two advantages of B-splines over Beizer curve? Briefly explain how curves are generated using B-spline function and properties of B-Spline curves. 13,K2,CO4

**OR**

- b) Compare parallel projections from perspective projections. 13,K2,CO4

15. a) Explain how the RAID technologies help in efficient storage and retrieval of multimedia data. 13,K2,CO5

**OR**

- b) Discuss in detail the MPEG 4 video compression standard. 13,K2,CO5

**PART - C (1 × 15 = 15 Marks)**

16. a) Explain the types of multimedia authoring systems and list the main attribute, benefits and drawbacks of authoring systems. 15,K3,CO6

**OR**

- b) Illustrate about distributed multimedia systems. 15,K3,CO6