**C** **Reg. No. :** | | | | | | | | | | |

**Question Paper Code: 55803**

B.E. / B.Tech. DEGREE EXAMINATION, MAY 2024

Fifth Semester

Computer Science and Engineering

15UIT503 -GRAPHICS AND MULTIMEDIA

(Common to Information Technology)

(Regulation 2015)

Duration: Three hours Maximum: 100 Marks

Answer ALL Questions

PART A - (5 x 1 = 5 Marks)

1. The translation distances (dx, dy) is called as CO1- R

   (a) Translation vector (b) Shift vector (c) Both a and b (d) Neither a nor b

2. The most basic transformation that are applied in three-dimensional planes are CO2- R

   (a) Translation (b) Scaling (c) Rotation (d) All of these

3. The color code "000" is for CO3- R

   (a) White (b) Black (c) Blue (d) Green

4. MIDI stands for CO4- R

   (a) Musical Instrument Digital Interface (b) Musical Instrument Design Interface

   (c) Musical Instrument Digital Instruction (d) MP3 Instrument Digital Interface

5. A video consists of a sequence of CO5- R

   (a) Frames (b) Signals (c) Packets (d) Slots

PART – B (5 x 3= 15Marks)

6. Write down the shear transformation matrix. CO1 R

7. Differentiate between interpolation spline and approximation spline. CO2 R

8. How will you convert from YIQ to RGB color model? CO3 R

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|---|---|---|---|---|
| 9. | | Write short notes on medium and traditional data streams. | CO4 R | |
| 10. | | Define the term multimedia communication. State the basic form of representing different media. | CO5 R | |

PART – C (5 x 16= 80 Marks)

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|---|---|---|---|---|
| 11. | (a) | Explain in detail on two dimensional geometric transformations with suitable examples. | CO1- U | (16) |
| | | Or | | |
| | (b) | Illustrate in detail the cohen sutherland line clipping algorithm with suitable examples. | CO1- U | (16) |
| 12. | (a) | With suitable examples, explain all 3D transformations. | CO2- U | (16) |
| | | Or | | |
| | (b) | Discuss the various surface detection methods in detail. | CO2- U | (16) |
| 13. | (a) | Write informative notes on RGB and HSV color models. | CO3- U | (16) |
| | | Or | | |
| | (b) | Elaborate in detail about the various shading models with relevant sketch. | CO3- U | (16) |
| 14. | (a) | Elucidate MIDI Messages and devices in detail. | CO4- U | (16) |
| | | Or | | |
| | (b) | Describe in detail JPEG compression technique with neat diagrams. | CO4- U | (16) |
| 15. | (a) | Discuss optical storage systems providing informative points. | CO5- U | (16) |
| | | Or | | |
| | (b) | Elaborate video conferencing with suitable architecture diagram. | CO5- U | (16) |