**Computer Graphics**

**ISE1 Component 2 Year 2022-23 Sem - II**

**Problems for Solving**

* **All questions are compulsory.**
* **Each question carries 5 Marks.**

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| **Question** | **B.L.** | **CO** |
| 1. Find the transformation of triangle A (2, 2), B (5, 1), C (3, 3) by    1. Rotating 900 about the origin in anticlockwise direction and    2. then translating 2, 3 units in x and y directions respectively. | 3 | CO2 |
| 1. Given a square with coordinate points A (2, 3), B (3, 3), C (3, 2), D (2, 2). Apply    1. 1st scaling with factor 2 and then    2. translate with distance 2 towards X axis and 3 towards Y axis.   Obtain the new coordinates of the square and draw the square before transformation and after transformation. | 3 | CO2 |
| 1. Consider the line from (1, 2) to (5, 6) rotate it through 900 about arbitrary point P (2, 2). | 3 | CO2 |
| 1. Determine the combined transformation matrix for following 3D transformations:    1. Translation with factors x = 2, Y = 3 and z = 2    2. Rotation through x-axis about an angle 450    3. Reflection through yz plane. | 3 | CO2 |

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