**Code No.PC5103ME**

**METHODIST COLLEGE OF ENGINEERING & TECHNOLOGY (An Autonomous Institution)**

**M.E I-Semester (Make-Up) Examination, June -2023**

**Subject: COMPUTER AIDED MODELLING AND DESIGN**

**Time: 3 hours Max.Marks:60**

**Note: Missing data, if any, maybe suitably assumed.**

**PART-A**

**Answer All the questions.**

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| **Q.No** | **Questions** | **Marks** | **CO** | **BTL** |
| **1. a** | Illustrate about CAD Workstation. | **2** | **1** | **2** |
| **b** | Define NURBS | **2** | **2** | **1** |
| **c** | List the various types of surface entities | **2** | **3** | **1** |
| **d** | Illustrate about Cell decomposition | **2** | **4** | **2** |
| **e** | Analyze the various features that can be utilized in feature based modeling | **2** | **5** | **4** |
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**PART-B**

**Answer Any Five questions**.

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| **Q.No.** |  | **Questions** | **Marks** | **CO** | **BTL** |
| **2.** | **a** | The pyramid defined by the coordinates A(0,0,0), B(1,0,0), C(0,1,0) and D(0,0,1) is rotated by 450 about the line L that has the direction V=J + K and passing through point C(0,1,0). Determine the coordinates of the rotated figure. | **10** | **1** | **4** |
|  |  |  |  |
| **3.** | **a** | Explain the characteristics of Bezier curve. | **10** | **2** | **2** |
| **b** | Develop the parametric representation equation for a circle |  | **2** | **3** |
| **4.** | **a** | Interpret the parametric representation equation of surface of revolution with a neat sketch. | **10** | **3** | **5** |
| **b** | Explain the various ways of parametric representation of plane surface. | **P.T.O** | **3** | **2** |
| **5.** | **a** | Compare boundary representation and constructive solid geometry. | **10** | **4** | **4** |
| **6.** | **a** | Explain about assembling modeling. | **10** | **5** | **2** |
| **b** | Explain about conceptual design. |  | **5** | **2** |
| **7.** | **a** | Examine about IGES | **10** | **1** | **4** |
| **b** | Compare Hermite Cubic Spline and Bezier curve. |  | **2** | **4** |
| **8.** | **a** | Illustrate about various types of surface entities. | **10** | **3** | **2** |
| **b** | Explain about Pure primitive instancing |  | **4** | **2** |
| **9.** | **a** | Explain about Behavioral modeling.. | **10** | **5** | **4** |
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