**Code No.PC5103ME**

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

**M.E I-Semester (Main) Examination, March -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 Shigley Design Process. | **2** | **1** | **2** |
| **b** | Compare analytic and synthetic entities. | **2** | **2** | **4** |
| **c** | Illustrate the parametric representation equation of ruled surface | **2** | **3** | **2** |
| **d** | List the various solid modeling techniques. | **2** | **4** | **1** |
| **e** | Categorize the different advanced modeling concepts | **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** | Determine the various 2D geometric transformations. | **10** | **1** | **4** |
|  | **b** | Explain about STL (data exchange format) |  | **1** | **2** |
| **3.** | **a** | Explain the characteristics of B-Spline curve. | **10** | **2** | **2** |
| **b** | Develop the parametric representation equation for a ellipse |  | **2** | **3** |
| **4.** | **a** | Interpret the parametric representation equation of tabulated cylinder with a neat sketch. | **10** | **3** | **5** |
| **b** | Explain about Bezier surface. | **P.T.O** | **3** | **2** |
| **5.** | **a** | Explain in detail about Boundary Representation. | **10** | **4** | **4** |
| **6.** | **a** | Explain about feature based modeling. | **10** | **5** | **2** |
| **b** | Explain about behavioral modeling. |  | **5** | **2** |
| **7.** | **a** | Examine about PDES | **10** | **1** | **4** |
| **b** | Compare B- Spline and Bezier curve. |  | **2** | **4** |
| **8.** | **a** | Illustrate about different surface entities. | **10** | **3** | **2** |
| **b** | Explain about Octree encoding. |  | **4** | **2** |
| **9.** | **a** | Discuss in detail about Top-down approach. | **10** | **5** | **4** |
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