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| LOGO.jpg | **GEETHANJALI INSTITUTE OF SCIENCE & TECHNOLOGY**  (**AN AUTONOMOUS INSTITUTION**)  **(Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu)**  **(Accredited by NAAC with “A” Grade, NBA (EEE,ECE & ME) & ISO9001:2008 Certified Institution)** |
| **QUESTIONBANK(DESCRIPTIVE)**  **Subject Name with Code: CAD/CAM/CIM & 22A0323T**  **Course & Branch: B Tech & MECH**  **Year& Semester: III & I** **Regulation: RG22** | |

**UNIT - I**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | Define the terms CAD and Cam. | **[L2] [CO1][2M]** |
|  | Define CAD Tools | **[L2] [CO1][2M]** |
|  | Define CAD/CAM tools | **[L2] [CO1][2M]** |
|  | Write any four advantages of CAM... | **[L2] [CO1][2M]** |
|  | Name the techniques that are used for improving the design of a product through CAD | **[L2] [CO1][2M]** |
|  | What are the various activities of a manufacturing plant which can be carried out through computer control? | **[L2] [CO1][2M]** |
|  | List out the 2D transformations | **[L2] [CO1][2M]** |
|  | What is homogenous transformations | **[L2] [CO1][2M]** |
| **Descriptive Questions (Long)** | | |
|  | Differentiate Automation and CAD/CAM. Write the advantages, disadvantages and applications of CAD/CAM | **[L2] [CO1][12M]** |
|  | Explain briefly the utilisation of CAD/CAM in Industrial Environment or Manufacturing Processes using CAD/CAM. | **[L2] [CO1][12M]** |
|  | Explain the process involved in Product cycle with CAD/CAM and without CAD/CAM with neat sketch. | **[L2] [CO1][12M]** |
|  | Explain briefly 2D Transformations used in CAD with neat diagram. | **[L2] [CO1][12M]** |
|  | Explain briefly 3D Transformations used in CAD with neat diagram. | **[L2] [CO1][12M]** |
|  | Explain briefly Homogenous Transformations used in CAD with neat diagram. | **[L2] [CO1][12M]** |
|  |  | **[L2] [CO1][6M]** |
|  | A point A (4, 3) is rotated counter clockwise direction by an angle of 450 . Find the Rotation Matrix and Resultant Point | **[L2] [CO1][6M]** |
|  | Scale a polygon with coordinates A (2,5) B (7,10) C (10,2) by 2 units in x direction and 2 units in y-direction. | **[L2] [CO1][6M]** |

**UNIT - II**

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| **S.No.** | **Question** | **[BT Level] [CO][ Marks]** |
| **2 Marks Questions (Short)** | | |
|  | What is wire frame modelling? | **[L2] [CO2][2M]** |
|  | Define Geometric Modelling. | **[L2] [CO2][2M]** |
|  | List out the types of Geometric modelling? | **[L2] [CO2][2M]** |
|  | Briefly explain CSG model | **[L2] [CO2][2M]** |
|  | What is Spline function and list the characteristics. | **[L2] [CO2][2M]** |
|  | Write the advantages of the Bezier curve. | **[L2] [CO2][2M]** |
|  | State few uses of NURBS | **[L2] [CO2][2M]** |
|  | What do you understand the ‘Snap’ feature in CAD? | **[L2] [CO2][2M]** |
|  | What are the limitations in utilising the sweep method in  geometric construction | **[L2] [CO2][2M]** |
| **Descriptive Questions (Long)** | | |
|  | Explain the types of Geometric Modelling with neat sketches. | **[L2] [CO2][12M]** |
|  | Write the advantages and disadvantages of Wire Frame Modelling? | **[L2] [CO2][6M]** |
|  | Write the advantages and disadvantages of Solid Modelling? | **[L2] [CO2][6M]** |
|  | Write the advantages and disadvantages of Surface Modelling? | **[L2] [CO2][6M]** |
|  | Explain about Constructive Solid Geometry CSG? | **[L2] [CO2][6M]** |
|  | State surface entities and explain types of surfaces. | **[L2] [CO2][6M]** |
|  | Explain about Bezier Curves and write its advantages and disadvantages. | **[L2] [CO2][12M]** |
|  | Explain about B-spline Curves and write its advantages and disadvantages. | **[L2] [CO2]12M]** |
|  | Explain about Hermit Curves and write its advantages and disadvantages. | **[L2] [CO2][12M]** |
|  | Explain about Coons Patch and write its advantages and disadvantages. | **[L2] [CO2][6M]** |