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**PRESIDENCY UNIVERSITY  
BENGALURU**

**SCHOOL OF ENGINEERING  
MID TERM EXAMINATION - OCT 2023**

**Semester :** Semester V - 2021

**Course Code :** MEC3017

**Course Name :** Sem V - MEC3017 - CAD for Additive Manufacturing

**Program :** B. TECH

**Date :** 31-OCT-2023

**Time :** 11:30AM - 1:00PM

**Max Marks :** 50

**Weightage :** 25%

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**Instructions:**

- (i) Read all questions carefully and answer accordingly.
  - (ii) Question paper consists of 3 parts.
  - (iii) Scientific and non-programmable calculator are permitted.
  - (iv) Do not write any information on the question paper other than Roll Number.
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**PART A**

**ANSWER ALL THE QUESTIONS**

**(5 X 2 = 10M)**

1. Whats the function of automatic drafting in geometric modelling?  
(CO1) [Knowledge]
2. Additive manufacture uses CAD tool for designing the components or parts any product. List out the benefits of CAD in additive manufacturing  
(CO1) [Knowledge]
3. List out the application of CAD in manufacturing industry  
(CO1) [Knowledge]
4. **What is an IGES file used in CAD system?**  
(CO2) [Knowledge]
5. List out the transformation in computer graphics  
(CO2) [Knowledge]

**PART B**

**ANSWER ALL THE QUESTIONS**

**(4 X 5 = 20M)**

6. Every design of product involves a set of process and regulation standards. Explain the four steps in CAD design process.  
(CO1) [Comprehension]
7. How does the geometric modelling fit into a modern design sequence?  
(CO1) [Comprehension]

8. CAD makes it easier to complete work at a lower cost and in less time. With the flow chart explain the generic CAD process. 5M] (C.O.1) [Comprehension]

(CO1) [Comprehension]

9. Most of the openers probably convert an IGS file to a different file format, How to Convert an IGS File to DWG & DXF File explain the steps briefly

(CO2) [Comprehension]

### **PART C**

#### **ANSWER THE FOLLOWING QUESTION**

**(1 X 20 = 20M)**

10. (a) Given a square object with coordinates points A (0,4), B (4,4),C (4,0)and D (0,0) . Apply the scaling parameter 2 towards X axis and 3 towards Y axis and obtain the new coordinates of the objects. Show the graphical representation of the reflection. [10M] (C.O.2) [Application]

(b) Given a triangle with corner coordinates (0,0) (1,0) and (1,1) Rotate the triangle by 75 degree anticlockwise direction and find out the new coordinates [10M] (C.O.2) [Application]

(CO2) [Application]