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**5th Sem / Branch : Automation & Robotics**
**Sub.: CAD and CAM**

Time : 3Hrs. M.M. : 60

**SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 In AutoCAD, the command Ctr+Q is used for:

a) Plot dialog box b) Object

c) Exit d) Open drawing

Q.2 A cubic B-spline curve requires minimum _____ control points.

a) 3 b) 5

c) 4 d) 6

Q.3 _____ is usually employed in the open-loop control system

a) Servo meter b) Induction motor

c) Stepper motor d) Brush less DC motor

Q.4 Which command is used for creating rectangles in AutoCAD?

a) Squr b) RET

c) REC d) ISO

Q.5 To obtain parallel lines, concentric circles and parallel curves_____ is used in AutoCAD?

a) Fillet b) Offset

c) Copy d) Array

Q.6 The integration of CAD and CAM is called

a) Computer Aided Design

b) CAE/CAM

c) Computer Aided Engineering

d) Computer Integrated Manufacturing

## SECTION-B

**Note:** Objective type questions. All questions are compulsory. (6x1=6)

Q.7 Define geometric modelling?

Q.8 NC stands for _____.

Q.9 Define CAM.

Q.10 What do you meant by "Canned Cycle"?

Q.11 Define Extrusion.

Q.12 What is the use of CATIA?

## SECTION-C

**Note:** Short answer type questions. Attempt any eight questions out of ten questions. (8x4=32)

Q.13 Explain 3D transformation matrix for translation, Rotation and Scaling with neat figure.



Q.14 Describe two editing and solid modeling commands.

Q.15 Explain about CSG approach in solid modelling.

Q.16 Describe the various G and M codes used in CNC machines.

Q.17 Briefly explain the different types of control systems in NC.

Q.18 What are the feedback devices generally used in CNC machines?

Q.19 Explain the various types of file formats.

Q.20 Explain the hidden line removal algorithm.

Q.21 Compare Parametric and non Parametric representations.

Q.22 Briefly explain about NC Coordinate systems.

## SECTION-D

**Note:** Long answer type questions. Attempt any two questions out of three questions. (2x8=16)

Q.23 Name some types of curves used in geometric modeling and explain any two.

Q.24 Explain DNC. Also explain its components, advantages and disadvantages.

Q.25 Explain the following terms in the context of CAM:

a) Tool nose radius compensation

b) Circular interpolation

c) Subroutines

d) Mirror image