

## **SECTION-D**

**Note:** Long answer type questions. Attempt any two questions out of three questions.  $(2 \times 8 = 16)$

Q.23 Explain various 3D Modeling tools used in AutoCAD?  $(CO_2)$

Q.24 Explain various inspection and testing methods for determining product quality  $(CO_5)$

Q.25 Write a short note on any two questions given below:

a) Explain various design considerations used in 3D printing techniques.  $(CO_4)$

b) Compare Additive Manufacturing Vs Conventional Manufacturing  $(CO_3)$

c) Discuss various applications of Auto CAD  $(CO_1)$

(60)

(4)

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No. of Printed Pages : 4

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**3rd Sem / Branch : Automation & Robotics  
Subject:- AutoCAD and 3D Printing**

Time : 3Hrs.

M.M. :60

## **SECTION-A**

**Note:** Multiple choice questions. All questions are compulsory  $(6 \times 1 = 6)$

Q.1 A polyline can be broken into individual lines and arcs using which of the following command?  $(CO_1)$

- a) BREAK
- b) TRIM
- c) EXPLODE
- d) OVERKILL

Q.2 Identify the types of destructive testing  $(CO_5)$

- a) Radiographic test
- b) Dye penetrant test
- c) Creep test
- d) Visual testing

Q.3 Shortcut for Trim command is  $(CO_2)$

- a) T
- b) TR
- c) TI
- d) X

Q.4 Which coordinate option can be used to reset the orientation of UCS to its default?  $(CO_1)$

- a) UCS, World
- b) UCS, Named UCS
- c) UCS, Previous
- d) UCS Icon, Properties

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Q.5 The function of a polar array is to create object  
(CO2)

- a) In a grid pattern
- b) In a circular pattern
- c) In a straight line
- d) All of the above

Q.6 What are the basic characteristics of 3D Printing?  
(CO4)

- a) 3D objects are made in layers, it is an additive process
- b) 3D objects are created using a subtractive process
- c) 3D objects print from the computer
- d) 3D objects are downloaded and printed from the internet

## SECTION-B

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

Q.7 Define WCS co-ordinate system. (CO1)

Q.8 Name any file format used for 3D Printing. (CO2)

Q.9 Name few materials used for 3D Printing (CO3)

Q.10 Define VAT photo polymerization (CO4)

Q.11 What is NDT in testing. (CO5)

Q.12 What is fillet command use. (CO1)

## SECTION-C

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

Q.13 Compare Isometric and orthographic views. (CO2)

Q.14 Explain STL file format and problems with STL file format. (CO2)

Q.15 Explain basic editing commands used in autocad. (CO1)

Q.16 Write a short note rectangular and polar array commands. (CO1)

Q.17 Explain concept of 3D printing and its applications (CO3)

Q.18 Explain in brief concept of additive manufacturing. (CO3)

Q.19 Explain in brief shrinkage and warping defect with its causes (CO5)

Q.20 Write a short note on heat treatment equipments. (CO5)

Q.21 Explain benefits and limitation of material extrusion. (CO4)

Q.22 Write a short note on material jetting. (CO4)