

SECTION-D

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

- Q.23 Differentiate between UCS and WCS coordinates in detail. (CO1)

Q.24 Explain the concept of Direct Energy Deposition including its principle, parameters and its advantages. (CO4)

Q.25 Explain Different types of defects and their causes in detail. (CO5)

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3rd Sem.

Branch : Automation & Robotics
Sub.: Auto CAD & 3D Printing

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (6x1=6)

- Q.1 In Auto CAD, the number of workspaces is (CO1)

 - a) 1
 - b) 2
 - c) 3
 - d) 4

Q.2 The shortcut to start a table is (CO1)

 - a) T
 - b) TA
 - c) TBL
 - d) TABLE

Q.3 Auto CAD commands can be accessed in (CO1)

 - a) Drawing area
 - b) Status bar
 - c) Tool bars
 - d) Command window

Q.4 The shortcut command for a rectangle (CO1)

 - a) R
 - b) RE
 - c) REC
 - d) RET

Q.5 What is the main advantages of 3D printing over traditional manufacturing methods? (CO3)

- a) Lower cost
- b) Faster production speed
- c) Ability to create complex geometries
- d) More durable materials

Q.6 Which 3D printing method is most suitable for creating highly detailed object with smooth surfaces. (CO4)

- a) Fused deposition modeling (FDM)
- b) Stereolithography (SLA)
- c) Selective laser sintering (SLS)
- d) Digital light processing (DLP)

SECTION-B

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

Q.7 Write the shortcut command for making Circle. (CO1)

Q.8 Full form of CAD is _____. (CO1)

Q.9 _____ 3D printing method uses a liquid resin cured by light source to create solid objects? (CO3)

Q.10 STL stands for _____. (CO3)

Q.11 Additive manufacturing uses much less material than other subtractive manufacturing processes. (True / False)

Q.12 Which material is not used in 3D printing? (CO4)

SECTION-C

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

Q.13 Write a short note on 3D Printer Software. (CO1)

Q.14 Name the applications of Auto CAD. (CO2)

Q.15 Explain the Auto CAD User Interface? (CO2)

Q.16 Explain the 3D printing core process? (CO3)

Q.17 Classify 3D printing based on the metal systems used during 3D Printing. (CO3)

Q.18 Explain key parameters involved in Material Extrusion technique. (CO4)

Q.19 What are the disadvantages of Direct Energy Deposition technique in 3D printing? (CO4)

Q.20 Describe the principle of Material Jetting in additive manufacturing. (CO4)

Q.21 Discuss the design parameters considered in 3D printing. (CO5)

Q.22 Explain different Hand Tools. (CO5)