

 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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Roll No.

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)

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|-----------------|--|-------|
| 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)