



# CBCS SCHEME

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Question Paper Version : A

## Third Semester B.E. Degree Examination, June/July 2023 Additive Manufacturing

Time: 1 hr.]

[Max. Marks: 50

### INSTRUCTIONS TO THE CANDIDATES

1. Answer all the fifty questions, each question carries one mark.
2. Use only **Black ball point pen** for writing / darkening the circles.
3. **For each question, after selecting your answer, darken the appropriate circle corresponding to the same question number on the OMR sheet.**
4. Darkening two circles for the same question makes the answer invalid.
5. **Damaging/overwriting, using whiteners on the OMR sheets are strictly prohibited.**

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1. Which of the following is not an example of additive manufacturing?
    - a) fused – deposition – modelling
    - b) Electron beam machining
    - c) SLS
    - d) Injection modeling
  2. Full form of STL is
    - a) Straight – lithography
    - b) Streto – lithography
    - c) Stereo – lithography
    - d) Straight – lipsography
  3. Form the following, alternative name for rapid prototyping is
    - a) Additive manufacturing
    - b) Layer manufacturing
    - c) Direct CAD manufacturing
    - d) All of the above
  4. Which file type is most commonly exported from CAD software?
    - a) SLDRT
    - b) JPG
    - c) STL
    - d) X3G

5. What does SLS stand for?
  - a) Selective laser sintering
  - b) Selective lithographic solution
  - c) separated light sintering
  - d) none of the above
  
6. Additive manufacturing uses much less material than other subtractive manufacturing processes
  - a) True
  - b) False
  
7. Which one is NOT related to rapid prototyping definition?
  - a) Layer by Layer
  - b) Physical model
  - c) form 3D CAD data
  - d) Production line
  
8. Which CAD software cannot be used to create data for the prototyping machine?
  - a) CREO
  - b) CATIA
  - c) NX unigraphics
  - d) Adobe illustrator
  
9. Additive manufacturing is term that refers to fabrication technology that add layers
  - a) True
  - b) False
  
10. Which of the following is the process of the pre – processing stage?
  - a) Remove support
  - b) Checking 3D CAD data
  - c) Depowdering loose material
  - d) Dip in binder to strength the part
  
11. What is the format for the prototyping machine file?
  - a) .prt
  - b) .slt
  - c) .stl
  - d) .igeS
  
12. STL files contains
  - a) mass properties of the model
  - b) geometrical data
  - c) drawing data
  - d) all of the above
  
13. To meet the customer's demand in today's market, we need
  - a) Rapid manufacturing
  - b) Conventional manufacturing
  - c) Inconditional manufacturing
  - d) None of the above

14. Which file format cannot be converted into STL file format?  
a) .prt                      b) .sld                      c) .dwg                      d) .stp
15. STL file format is represented by interaction of  
a) line and hexagons  
b) lines and rectangles  
c) line and triangles  
d) lines and circles
16. Process of converting STL file model into layers is called  
a) chopping                      b) slicing                      c) cutting                      d) trimming
17. Which of the following is not liquid based RP system?  
a) Stereolithography apparatus (SLA)  
b) Laminated object manufacturing (LOM)  
c) Solid ground curing (SGC)  
d) Solid object ultraviolet – laser printer (SOUP)
18. Liquid AM is suitable for  
a) Prototypes  
b) Individual objects  
c) Small scale industrial production  
d) All of the above
19. Liquid AM deposits a liquid or high viscosity material  
a) True                      b) False
20. In the \_\_\_\_\_ process one starts with a single block of solid material larger than the final size of object and material is removed until the desired shape is reached  
a) Subtractive process  
b) Additive process  
c) formative process  
d) All of above
21. SLA printers package material is in a  
a) chain                      b) spool                      c) cartridge                      d) none of these
22. SLA stands for stereolithography amplification  
a) True                      b) False
23. 3D printing technology is expanding and is now able to print metal parts  
a) True                      b) False



24. Which of the following is typically the most expensive type of 3D printer?  
a) SLA                      b) SLM                      c) FDM                      d) none of the above
25. SLA printing uses a plastic stand that's pushed through a heated nozzle  
a) True                      b) False
26. Which of the process, the input material is in powder form?  
a) LOM                      b) SLS                      c) FDM                      d) MJM
27. LENS stands for  
a) Laser –Engineered Net Shaping  
b) Laser – Emitted Net shaping  
c) Laser – Elicffed Net Shaping  
d) None of the above mentioned
28. Which of the process is available in colours?  
a) SLA                      b) FDM                      c) MJM                      d) 3D printer
29. What material is not used in 3D printing?  
a) Nylon                      b) ABS                      c) PLA                      d) PUC
30. Stereolithography is also called photopolymerization  
a) True                      b) False
31. Which one of the processes is NOT using a laser?  
a) LOM                      b) SLA                      c) SLS                      d) FDM
32. Full form of FDM is  
a) Fixed Development Modelling  
b) Fusion Development modelling  
c) Fused Deposition modelling  
d) Focused Deposition modelling
33. What printer melts metal  
a) SLS                      b) SLA                      c) SLS                      d) FDM
34. FDM stands for fused deposition modelling  
a) True                      b) False
35. Which is the cheapest type of 3D printer?  
a) FDM                      b) SLA                      c) Powder based                      d) SLM



44. EBM is not very accurate compared to SLA, SGC, etc  
a) True                      b) False
45. Direct metal deposition is  
a) a laser – assisted direct metal manufacturing process  
b) an x –ray assisted  
c) a microwave – assisted  
d) an electro magnetic
46. The process suitable for production of parts, molds, and dies are made out of tool steel is  
a) SLS                      b) FDM                      c) DMD                      d) LOM
47. Electron beam generation is typically a much more efficient process than laser beam generation  
a) True                      b) False
48. SDM stands for  
a) Shape Deposition Manufacturing  
b) Sheet Deposition Manufacturing  
c) Solid Deposition Manufacturing  
d) None of the above
49. SDM process is built from start to finish rather than by removing excess materials from a given object  
a) True                      b) False
50. SDM uses, which materials?  
a) Plastics                      b) metals                      c) resins                      d) all of the above

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