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Code No. :16108 AS N (E)

VASAVI COLLEGE OF ENGINEERING (Autonomous), HYDERABAD
B.E. (CBCS) VI-Semester Advanced Supplementary Examinations, July-2019

Additive Manufacturing and its Applications
(Open Elective-VII)

Time: 3 hours

Max. Marks: 70

Note: Answer ALL questions in Part-A and any FIVE from Part-B

Part-A (10 × 2=20 Marks)

1. Define AMT and mention the advantages of AMT
2. Which is the most time consuming step in AMT process chain? Justify your answer.
3. Compare and contrast between SLA and SGC AMT Process.
4. Name the AMT process that uses photo polymerization and briefly describe it.
5. List the various applications of LOM process.
6. What are the advantages of FDM process?
7. From among the SLS and 3DP AMT processes, which process gives accurate components? Justify your answer.
8. Name the various applications of SLS AMT Process.
9. List the various steps in SGC Process
10. Mention the advantages of 3D Printing Technology

Part-B (5 × 10=50 Marks)

11. a) With a neat sketch explain the various steps in AMT process chain. [5]
b) Under what circumstances AMT is preferred over conventional manufacturing? [5]
12. a) Discuss the working principle of SLA process. Mention its advantages, limitations and applications. [7]
b) Illustrate with a case study the application of SGC process [3]
13. a) Explain the working of FDM process and mention it's limitations and applications. [7]
b) Illustrate with an example the application of LOM process [3]
14. a) Write the working principle of SLS and mention the advantages and limitations of it. [7]
b) Distinguish between SLA and 3D Printing AMT process. [3]
15. a) Classify various types of AMT processes. [3]
b) Compare SGC with LOM processes. [7]
16. a) Discuss the working of LOM process and mention its advantages. [5]
b) Write the important steps in 3DP process and mention the specifications of it. [5]
17. Answer any *two* of the following:
 - a) Briefly discuss about various types of RP data formats. [5]
 - b) Explain how AMT is used in coin industry? [5]
 - c) Discuss various materials used in AMT. [5]
