

Roll No. ....

**3207**

**B. Tech. 5th Semester (ME)  
Examination – December, 2022**

**COMPUTER AIDED DESIGN & MANUFACTURING**

Paper : PCC-ME-301-G

Time : Three Hours ]

] Maximum Marks : 75

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt *five* questions in all, selecting *one* question from each Unit. Question No. 1 is *compulsory*. All questions carry equal marks.

1. (a) Define CAM.
- (b) What is additive manufacturing ?
- (c) What is 3-D scaling ?
- (d) Write difference between machining and additive manufacturing.
- (e) Define FMS.
- (f) Write about ruled surface.

2.5 × 6 = 15

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**UNIT – I**

**2.** What do you understand by computer Aided Design ?  
Discuss reasons for implementing CAD in industry. 15

**3.** Write about :

(a) Fundamentals of additive manufacturing. 8

(b) Applications of additive manufacturing. 7

**UNIT – II**

**4.** Write about :

(a) Concept of solid modeling. 8

(b) Cubic splines. 7

**5.** Discuss in detail about Bezier surface and B-spline surface. 15

**UNIT – III**

**6.** Differentiate between finite element analysis and finite element modeling in brief. 15

**7.** Write about :

(a) Design for Additive manufacturing. 8

(b) Power bed fusion process. 7

3207-1850-(P-3)(Q-9)(22) ( 2 )

**UNIT – IV**

**8.** Write about :

(a) FMS Layouts 8

(b) Advantages of FMS 7

**9.** What is conventional process planning ? Discuss various types of CAPP. 15

3207-1850-(P-3)(Q-9)(22) ( 3 )