

Roll No. :

Total No. of Questions : 9] [Total No. of Pages : 3

22602

**M.Tech. (ME) 1st Semester
Examination, March-2021
(CBCS Scheme)**

**COMPUTER AIDED DESIGN AND
MANUFACTURING
Paper-MTME21C2**

Time : Three Hours]

[Maximum Marks : 100

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 :- Question No. 1 is compulsory. Attempt total *five* questions by selecting at least *one* question from each Section.

1. Explain the following :

- (a) APT Language
- (b) Lofted Surfaces

(c) 2-D Translation

(d) Automated material handling 5×4=20

Section–A 20 each

2. Explain in detail combined transformation, orthographic, axonometric, oblique and perspective projections.
3. Explain in detail the basics of geometric and solid modeling. Also describe the various kinds of coordinate systems.

Section–B 20 each

4. Explain the following :
 - (a) Bezier surfaces
 - (b) Lofted surfaces
 - (c) Four curves form
5. Explain different types of algebraic and geometric forms of straight lines. Also explain ruled surfaces of revolution.

Section–C 20 each

6. Explain in brief numerical control system. Give the types of numerical control system. Also explain the CNC tooling machine tools.
7. Explain in detail the various NC, CNC and DNC systems.

Section–D 20 each

8. Explain in detail computer aided process planning and automated material handling system.
9. Explain the following :
 - (a) G-codes and M-codes
 - (b) Canned cycles
 - (c) Difference between manual and CNC part programming