

Roll No. : .....

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

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**B.Tech. (ME) 6th Semester (Supplementary)  
Examination, July-2021  
(G Scheme)**

**MANUFACTURING TECHNOLOGY-II**

**Paper-PCC-ME-302-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. (i) Classification of NC system
- (ii) Explain types of cutting fluid
- (iii) Define dielectric fluid with examples

(iv) Explain any two types of tool changer used in CNC machining

(v) Advantages of group technology

(vi) Surface finish  $2\frac{1}{2} \times 6 = 15$

**Unit-I**

15 each

2. Define tool wear and its types. Explain the effect of cutting fluid on tool life and also explain the criteria for selection of cutting fluid.
3. Explain merchant cutting force circle and shear angle relationship in orthogonal cutting.

**Unit-II**

15 each

4. What factors influence the design of jig and fixtures ? Describe the different types of clamps.
5. Explain USM and AJM on the basis of principles, equipment, process characteristics, advantages and disadvantages.

**Unit-III**

15 each

6. Explain NC tooling. Explain in detail various steps involved in manual part programming methods.

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7. Classify NC, CNC and DNC system and explain in detail about MCU, NC tooling and tool changer with neat and clean diagram.

**Unit-IV**

15 each

8. Discuss in detail the component classification and coding of group technology. Explain steps involved in planning of introduction of GT.
9. Explain the working of GT. What is group technology layout and what are the advantages of GT layout ?

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