

**B. Tech. (ME) 6th Semester (G Scheme)
Examination, July-2022**

MANUFACTURING TECHNOLOGY-II

Paper-PCC-ME-302-G

Time allowed : 3 hours]

[Maximum marks : 75

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

1. (i) Explain the principles of EDM.
- (ii) What is the concept of group technology ?
- (iii) Explain the mechanism of chip formation.
- (iv) Define absolute and incremental coordinate system.
- (v) What do you mean by locating and clamping devices ?
- (vi) Explain factors affecting tool life. $6 \times 2.5 = 15$

Unit-I

2. Explain merchant cutting force circle and shear angle relationship in orthogonal cutting. 15
3. Discuss different types of cutting fluids, their properties and selection criteria. 15

Unit-II

4. Differentiate jigs and fixtures. Explain locating principles and methods. 15
5. Explain ECM and ECG on the basis of principles, equipment, dielectric fluid, electrode, process characteristics, advantages and disadvantages. 15

Unit-III

6. Explain in detail CNC and DNC control of machine tool by explaining machining centre with neat and clean diagram. 15
7. Explain part programming procedure in detail with a suitable example. 15

Unit-IV

8. Discuss in detail the concept of group technology in an industry with its components. 15
9. What are the various steps in planning of group technology ? What is group technology layout and what are the advantages of GT layout ? 15