

Roll No.

3209

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

MANUFACTURING TECHNOLOGY - I

Paper : PCC-ME-305-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. Write short notes on following : 15
- (i) Tool material and Mechanism
 - (ii) Geometry of twist drill
 - (iii) Forward slip
 - (iv) Sine bar

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- (v) Sand Casting
- (vi) Forge welding

UNIT - I

- 2. Differentiate between orthogonal and oblique metal cutting with diagram. 15
- 3. What are the elements of machining cost and explain drills and power calculation in drills. 15

UNIT - II

- 4. Explain theories of plasticity and conditions of plane strains. 15
- 5. Discuss various types of comparator-mechanical, electrical in detail. 15

UNIT - III

- 6. Discuss various operations and parts of lathe machine with neat sketch. 15
 - 7. Explain Cutting systems in detail. 15
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UNIT - IV

- 8. Explain the principle of Submerged Arc Welding (SAW) with diagram. 15
- 9. Explain the basic principle of Hot and Cold working. 15

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