

Exam.Code:0940  
Sub. Code: 7050

1059

B.E. (Mechanical Engineering) Fourth Semester  
MEC-405: Manufacturing Technology – I

Max. Marks: 50

Allowed: 3 Hours

**E:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

I. Attempt the following:-

- a) Differentiate orthogonal and oblique metal cutting.
- b) Draw the nomenclature of single point tool.
- c) Name any four tool materials.
- d) What is indexing?
- e) What is bar feed mechanism?
- f) Name different types of grinding machines.
- g) What is truing?
- h) Draw the nomenclature broaching tool
- i) What is shell mill?
- j) Name various threads.

(10x1)

**UNIT – I**

- II. a) Explain the mechanism of chip formation and determine the shear angle.
- b) Discuss the effect of operating parameters on tool life (5,5)
- III. a) Discuss the various special attachments of lathe with neat sketch.
- b) Explain the construction and working of capstan lathe. (5,5)
- IV. a) Explain the slotting machine quick return mechanism with neat sketch.
- b) Discuss the effect of indexing mechanism in milling with neat sketch. (5,5)

**UNIT – II**

- V. a) Explain the construction and working principle of cylindrical grinding machine.
- b) Explain the various factors affecting selection of grinding wheel. (5,5)
- VI. a) Explain different boring heads.
- b) Explain broaching operations and applications. (5,5)
- VII. a) Explain the processes of making threads using thread milling with neat sketch.
- b) Explain the construction and working principle of automatic screw machine. (5,5)

x-x-x