

**III B.Tech II Semester Supplementary Examinations,
November/December 2005
PRODUCTION TECHNOLOGY-II
(Mechanical Engineering)**

Time: 3 hours

Max Marks: 80

**Answer any FIVE Questions
All Questions carry equal marks**

1. (a) Explain briefly the desired properties of tool materials.
(b) Which criteria determine machineability? Explain the term machineability index.
(c) Comment on Taylor's tool life equation. [6+5+5]
2. (a) Illustrate any two methods of step turning on a lathe.
(b) Discuss the different methods of taper turning on a lathe. [6+10]
3. Explain with a neat sketch the working principle of a pawl type of indexing mechanism for the turret movement. [16]
4. Explain with neat sketches the procedure for carrying out the following operation on a shaper.
(a) Horizontal cutting
(b) Vertical cutting
(c) Irregular cutting
(d) Keyway cutting [16]
5. (a) Explain the different work holding devices on boring machine?
(b) Compare Horizontal and Vertical Boring Machines? [10+6]
6. (a) Explain the functions of a universal dividing head.
(b) Describe the setup and procedure of cutting a cam on a universal milling machine. [8+8]
7. (a) Explain the term speed feed and depth of cut as applicable to grinding work.
(b) Explain any two methods of grinding thread forms. [4+12]
8. Write in detail any three types of lapping machines. [16]
