

**2006 JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY**

**II B.TECH II SEMESTER REGULAR EXAMINATIONS**

**MACHINE TOOL ENGINEERING  
(PRODUCTION ENGINEERING)**

**APRIL 2006**

**TIME : 3 HOUR  
MARK : 80**

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**ANSWER ANY FIVE QUESTIONS ALL QUESTIONS CARRY EQUAL MARKS**

1. (a) Enumerate the factors on which tool wear and tool life depend.  
(b) What are essential characteristics of cutting fluid?
2. (a) Describe briefly about taper turning methods?  
(b) What are the different types of Lathe attachments? Discuss them briefly.
3. (a) What is meant by tool layout of a turret lathe? Discuss  
(b) Enumerate various rules, which must be followed while laying out sequence of operations for a turret lathe.
4. (a) What is planer? Illustrate and describe its working principle.  
(b) Give detailed classification of planer machines.
5. (a) Enumerate the uses and limitations of the following drilling machine
  - i. Sensitive drilling machine
  - ii. Pillar drilling machine
  - iii. Radial drilling machine  
(b) Explain what is meant by spot facing?
6. Explain with a neat sketch what do you understand by the words “ helix angle”and “direction of cut” in the case of milling. What is their importance with respect to machining performance? Explain the basis on which these are selected.
7. (a) Explain the role of using cutting fluids during grinding.  
(b) Explain the various precautions to be taken before mounting a grinding wheel.
8. (a) Explain clearly how work pieces are located .  
(b) Write a short note on Clamps and clamping devices.