Code No: OR320352 **OR**

III B.Tech II Semester Supplementary Examinations, April/May 2005
PRODUCTION TECHNOLOGY-II
(Common to Mechanical Engineering and Production Engineering)
Time: 3 hours **Max Marks: 70**

Answer any FIVE Questions
All Questions carry equal marks

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1. (a) Discuss the various types of chips produced during metal cutting.
   (b) In orthogonal cutting operation feed is 0.10 mm and chip thickness is 0.25 mm. The cutting force is 136 kg and the feed thrust force is 77 kg. The rake angle of the tool is $+10^{o}$.Find
      i. The shear angle
      ii. The co-efficient of friction on the face of the tool.
2. (a) Explain with a neat sketch principal of working of lathe.
   (b) Describe the working of universal clock.
3. (a) Sketch and explain the elements of Twist drill.
   (b) With the help of a neat sketch explain the working of the principal parts of a pedestral drilling machine.
4. (a) Explain the working of a hydraulic quick return mechanism of a shaper with a neat sketch.
   (b) Describe the working of a automatic table feed mechanism for the shaper.
5. (a) With the help of a block diagram describe the construction and working of a double housing planer.
   (b) Differentiate between shaper slotter and planner.
6. (a) Sketch and describe the following milling cutters with their uses.
      i. plain milling cutter
      ii. side milling cutter.
   (b) Describe with a neat sketch the construction and working of plain dividing head.
7. (a) Sketch and describe the different parts of an external cylindrical grinder.
   (b) Explain the different methods of dressing the wheels.
8. Write a short notes on any FOUR of the following:
   (a) Parameters effecting cutting tool life
   (b) Tool holding devices in Lathe
   (c) Attachments used in Jig Boring machines

(d) Function of over arm in Milling

(e) Coolants used in grinding work.

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