

Code: 9A03503

**R9**

B.Tech III Year I Semester (R09) Supplementary Examinations, May 2013

**MACHINE TOOLS**

(Mechanical Engineering)

Time: 3 hours

Max Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Explain at least four types of chip breakers and their working with neat sketches.
- 2 With a block diagram, explain the method of taper turning by tail stock set-over method.
- 3 (a) What is a shaper? Explain its working principle.  
(b) With a block diagram, explain the principal parts of a shaper.
- 4 With a neat block diagram, discuss the advantages of a radial drilling machine.
- 5 With a neat block diagram, explain the features and working of a horizontal milling machine.
- 6 (a) What do you understand by grain or grit with respect to grinding wheels?  
(b) Explain various grades of grinding wheels.
- 7 Explain in details how hand lapping is carried out for external cylindrical work.
- 8 What are screw clamps? Explain the features of a screw clamp with neat sketch.

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