

Code :R5320303

R5**III B.Tech II Semester(R05) Supplementary Examinations, April/May 2011****MACHINE TOOLS**

(Mechanical Engineering)

Time: 3 hours**Max Marks: 80**

Answer any FIVE questions
All questions carry equal marks

1. (a) What are the various types of cutting fluids? Explain.
(b) What are the essential properties of cutting fluids? Explain.
2. (a) Why are engine lathes called by that name?
(b) Discuss the specifications of lathe.
(c) What are the basic parts of an engine lathe? Discuss the function of head stock.
3. Describes the working principle of quick return mechanisms used in shaper with sketches.
4. (a) What are different tool holding devices used in drilling machine? Brief them.
(b) What is spade drill? When is it used? Sketch one.
5. (a) Sketch and describe the working of a drum- type milling machine.
(b) Explain how a tracer controlled milling machine can be used for milling threads.
6. (a) Why balancing is required in grinding? Suggest some methods for balancing a grinding wheel.
(b) Explain the basic principle of metal removal in grinding.
7. (a) How broaching is done on horizontal pull type broaching machines?
(b) Why is it necessary to know the tooth load on a broach. How do you calculate it?
8. (a) Why should jig have four feet and not three ? Explain the reason.
(b) Name the essential elements which make up a jig or a fixture.
