Code: 9A03503

B.Tech III Year I Semester (R09) Regular & Supplementary Examinations December 2014
MACHINE TOOLS
(Mechanical Engineering)

Time: 3 hours   Max Marks: 70

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

1   With a neat sketch define and explain principal angles of single point tools.

2   Write short notes on the following:
   (a) Tool post.
   (b) Lathe saddle.
   (c) Compound rest.

3 (a) What is a shaper? Explain its working principal.
   (b) With a block diagram, explain the principal parts of a shaper.

4   With a neat sketch, explain the process of counter boring and counter shrinking on boring
        machine.

5 (a) What is hand milling machine? Explain its uses.
   (b) What are the planer type milling machines? Explain their features.

6 (a) How is the size of a grinding machine specified?
   (b) What are the merits and demerits of grinding as compared to other machining operations?

7 (a) Explain the working principle of a lapping machine with a neat sketch.
   (b) What are the advantages of lapping?

8 (a) Clearly explain the difference between jig and fixture.
   (b) Explain the important considerations that should be made in location of work pieces.

*****