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Fourth Semester B.E. Degree Examination, June-July 2009
Manufacturing Process - II

Time: 3 hrs.

Max. Marks:100

**Note : Answer any FIVE full questions, selecting atleast
TWO questions form each Part – A and Part - B.**

PART - A

- 1
 - a. With neat sketches, give nomenclature of a single point cutting tool. (07 Marks)
 - b. Derive the conditions $2\phi + \beta - \gamma = \frac{\pi}{2}$. Explain its significance with usual notations. (07 Marks)
 - c. List various factors influencing tool – life. Explain any one of them. (06 Marks)
- 2
 - a. List various cutting tool materials in the increasing order of their hardness. (06 Marks)
 - b. Explain with the help of neat sketches, heat distribution at tool and workpiece. (06 Marks)
 - c. What are the methods of measurement of temperature of cutting tool tip? Explain any one of them. (08 Marks)
- 3
 - a. Differentiate between capstan and turret lathes. (05 Marks)
 - b. With a neat sketch, explain any one of the driving mechanisms used in a shaping machine. (08 Marks)
 - c. Sketch a planning machine indicating major parts. Name any one of the mechanism for quick return movement in a planer. (07 Marks)
- 4
 - a. List various drilling machines. (05 Marks)
 - b. Draw neat sketch of a radial drilling machine indicating parts. (06 Marks)
 - c. Sketch and mention the application of the drilling machine operations – counter boring reaming and trepanning. (09 Marks)

PART - B

- 5
 - a. With sketches, differentiate between up milling and down milling operations. (06 Marks)
 - b. Draw a neat sketch to show major parts of a horizontal milling machine. (08 Marks)
 - c. What is Indexing? Explain compound indexing. (06 Marks)
- 6
 - a. List various grinding wheel abrasives and bonding processes. (07 Marks)
 - b. Sketch a centre type – cylindrical grinding machine indicating parts. (08 Marks)
 - c. Differentiate between horizontal and vertical grinding machines. (05 Marks)
- 7
 - a. Sketch and explain vertical lapping machine. (08 Marks)
 - b. Name the parts along with a neat sketch of a tool head for honing of holes. (07 Marks)
 - c. List the uses of lapping process. (05 Marks)
- 8
 - a. Mention any five non – traditional machining processes. (05 Marks)
 - b. Explain AJM with a neat sketch. (10 Marks)
 - c. What are the applications of non traditional machining methods? (05 Marks)
