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Manipal Institute of Technology, Manipal

(A Constituent Institute of Manipal University)



III SEMESTER B.TECH (INDUSTRIAL & PRODUCTION ENGINEERING)

END SEMESTER MAKE-UP EXAMINATIONS, DEC 2015/JAN 2016

SUBJECT: MANUFACTURING PROCESS ENGINEERING [MME 2111]

REVISED CREDIT SYSTEM
(03/01/2016)

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitable assumed.

- 1A. With the neat sketch list any 4 comparisons between Orthogonal and Oblique cutting. (03)
- 1B. Explain with the neat sketch the different types of tool wear. (03)
- 1C. Sketch and explain the 3 jaw and 4 jaw chucks used in lathe (04)
- 2A. Find the crank movement required to divide the periphery of the job into 6 equal divisions using standard index plate 1 having 15, 16, 17, 18, 19, 20 holes. (03)
- 2B. Give any three major differences between the shaper and planer. (03)
- 2C. With a neat sketch explain the shaper machine. (04)
- 3A. List the different types of abrasive bonds and explain any two of them. (05)
- 3B. With the neat sketch explain the working principle of Stereo lithography rapid prototyping method. (03)
- 3C. List all the factors affecting the selection of good pattern material. (02)

- 4A.** With the neat sketch explain the welding method where tungsten electrodes and hydrogen gas are used. **(04)**
- 4B.** With the neat sketch explain the welding method where large amount of flux is used. **(04)**
- 4C.** List all the characteristics required in a good gate **(02)**
- 5A.** With the neat sketch explain the method of welding carried at high vacuum. **(04)**
- 5B.** With the neat sketch briefly explain the following sheet metal operations **(04)**
- Roll forming
 - Lancing
 - Wiring
 - Trimming
- 5C.** With the neat sketch explain the method of testing the clay content of moulding sand. **(02)**