



## III SEMESTER B.TECH (I & P ENGG.)

### END SEMESTER MAKE UP EXAMINATIONS, DEC 2016/JAN 2017

SUBJECT: MANUFACTURING PROCESS ENGINEERING [MME 2111]

REVISED CREDIT SYSTEM

(30/12/2016)

Time: 3 Hours

MAX. MARKS: 50

#### Instructions to Candidates:

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

**1A.** Sketch and explain any two electric resistance welding process. **04**

**1B.** Explain dry sand and skin dry mold with two advantages and disadvantages. **03**

**1C.** Explain the casting process with neat sketches which produces multiple castings in a single set up. **03**

**2A.** During machining of stainless steel with ceramic cutting tool, the following observations are made **03**

Cutting speed (m/min.)	650	100
Tool life (min.)	2	300

Find the tool life for speed of 250m/min.

**2B.** Sketch and explain plaster mold casting. List its advantages and disadvantages. **03**

**2C.** Explain clay content test. **02**

**2D.** With neat sketches explain notching and roll bending operation. **02**

**3A.** Sketch submerged arc welding process. **02**

**3B.** With a neat sketch explain cutting forces in orthogonal cutting. **03**

**3C.** Sketch and explain the fused deposition modeling method of rapid prototyping and list the advantages and disadvantages of rapid prototyping. **05**

- 4A.** Sketch and explain the working principle of lathe. **04**
- 4B.** Find the angle at which the compound rest should be set to turn a taper on the workpiece having a length of 400mm. The larger and smaller diameter of the work piece is 65mm and 40mm respectively. **02**
- 4C.** Explain principle of indexing. Divide the periphery of the job into 14 divisions using plate 2 having 21, 23, 27,29,31,33 holes. **04**
- 5A.** Sketch the horizontal shaper and explain the major parts. **04**
- 5B.** With a neat sketch explain the double housing planer. **03**
- 5C.** Sketch and explain the surface grinding machine. **03**