



III SEMESTER B.TECH. (MECHANICAL ENGINEERING) END SEMESTER MAKE-UP EXAMINATIONS, DECEMBER 2017

SUBJECT: MANUFACTURING TECHNOLOGY [MME 2105]

REVISED CREDIT SYSTEM

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

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

- 1A. How permeability number of moulding sand is determined? Explain with a sketch. Also, discuss with sketches, how specimen for such tests are prepared? 3
- 1B. How are castings obtained by the Croning process? Support your answer with sketches. 3
Hollow cylindrical castings of uniform wall thickness are to be prepared
- 1C. without using cores. Suggest a suitable casting technique and explain the same with a sketch. 4
- 2A. Explain with a sketch, Gas Metal Arc welding process. 3
- 2B. What are the different stages in Spot welding. Explain with help of sketches. 3
- 2C. Explain thermit welding process with neat sketch. 4
- 3A. Suggest and discuss with sketches, three ways to overcome the spring back effect while bending of sheet metals. 3
- 3B. Explain the following sheet metal operations with neat sketches, (i) Lancing, (ii) Slitting and (iii) Nibbling
- 3C. With a neat sketch explain the working of radial drilling machine 3
- 3D Explain the significance of back gear mechanism with a neat sketch. 4
- 4A. With a neat sketch explain the construction and working of indexing/dividing head of a milling machine. 3
- 4B. Write a short note on the following bonding materials used in grinding wheels: Rubber Bond, Silicate Bond and Resinoid Bond. 3
- 4C. Explain with a neat sketch the working of Abrasive Jet Machining. 4
- 5A. Explain the twist drill nomenclature with the help of a neat sketch. 3
- 5B. Explain with a neat sketch the working of Electric Discharge Machining. 3
- 5C. With the use of suitable indexing methods find the indexing movement for 111, 72 and 8 divisions for three cylindrical workpieces. 4