



III SEMESTER B.TECH. (MECHANICAL ENGINEERING) END SEMESTER EXAMINATIONS, NOVEMBER 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.

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| 1A. | How grain fineness number of moulding sand is evaluated? Explain with neat sketch and a suitable example. | 3 |
| 1B. | Explain "Plaster mould casting" and "Slush casting" processes with neat sketches. | 3 |
| 1C. | How are castings produced with wax patterns? Draw sketches and discuss the various steps involved in such process. | 4 |
| 2A. | Explain with a sketch, Gas Tungsten Arc welding process. | 3 |
| 2B. | Explain with sketch, a welding process in which heat required for melting is obtained by principles of both, arc and resistance. | 3 |
| 2C. | Write short notes on constituents of moulding sand. | 4 |
| 3A. | What is spring back effect associated with sheet metal operations? Explain with sketches. | 2 |
| 3B. | Explain the processing technique used to produce products like dinnerware and television set frames. | 3 |
| 3C. | State six differences between Shaper and Planer. | 3 |
| 3D. | Explain the significance of thread cutting mechanism with a neat sketch. | 2 |
| 4A. | With a neat sketch explain the construction and working of column and knee type of milling machine. | 3 |
| 4B. | Explain with a neat sketch the concept of centerless grinding. | 3 |
| 4C. | Explain with a neat sketch the working of Ultrasonic Machining. | 4 |
| 5A. | Classify different types of drill bits on the basis of size, type of shank and helix angle of the flutes. | 3 |
| 5B. | Explain with a neat sketch the working of Laser Beam Machining. | 3 |
| 5C. | With the use of suitable indexing methods find the indexing movement for 99, 69 and 8 divisions for three cylindrical workpieces. | 4 |