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INTERNATIONAL CENTRE FOR APPLIED SCIENCES
(Manipal University)
III SEMESTER B.S. DEGREE EXAMINATION – NOV. / DEC. 2016
SUBJECT: MANUFACTURING PROCESSES (ME 235)
(BRANCH: I&P)
Monday, 28 Nov. 2016

Time: 3 Hours

Max. Marks: 100

- ✓ Answer ANY FIVE full Questions.
- ✓ Missing data, if any, may be suitably assumed.
- ✓ Draw neat sketches wherever required with PENCIL only.

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| 1A | Define casting. Mention steps involved in getting a casted component. List some of the applications of Casted Components. | 10 |
| 1B | List the various sand strength tests conducted on Moulding sand. Explain how these sand tests are conducted with relevant specimen figures. | 10 |
| 2A | List the various special casting methods. With a neat figure explain Hot chamber die casting method. | 10 |
| 2B | With a neat diagram explain Shielded metal arc welding. State the advantages and disadvantages of this welding process. | 10 |
| 3A | With a neat diagram explain Resistance seam Welding and spot welding processes. | 10 |
| 3B | With a neat figure explain the thread cutting operation on a Lathe. Mention the relevant relations used to calculate the gear ratio for thread cutting. | 10 |
| 4A | Draw a neat figure of a Radial Drilling Machine indicating its important parts. Explain why this machine is used widely for drilling compared to other types of drilling Machines. | 10 |
| 4B | With neat figures explain Angular Milling and Straddle Milling operations. | 10 |
| 5A | With a neat figure explain the different specifications of an Engine Lathe. | 10 |
| 5B | With neat figures explain spot facing and counter sinking operation. | 05 |
| 5C | Define the term Indexing and its purpose. Also mention the normally used indexing methods used. | 05 |
| 6A | Define the terms Grit, Grade and structure related to grinding wheels. Explain the term Dressing of grinding wheels. | 10 |
| 6B | List different methods of producing Plastic components. Explain with neat sketch how the plastic components are processed by Blow moulding Method. | 10 |

- 7A With neat sketches explain the following sheet metal working processes. 10
Blanking, Punching, Coining and Embossing.
- 7B With a neat figure explain the Electric discharge Machining Process. State the 10
advantages and disadvantages of this process.
- 8A State the differences between: 10
(i) Universal and independent Chuck
(ii) Surface grinding and cylindrical grinding
- 8B Write short Notes on: 10
(i) Lathe Carriage Assembly
(ii) Permanent mould casting

