

CBCS Scheme

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15AU36

Third Semester B.E. Degree Examination, Dec.2016/Jan.2017

Manufacturing Process – I

Time: 3 hrs.

Max. Marks: 80

Note: Answer any FIVE full questions, choosing one full question from each module.

Module-1

- 1 a. Briefly explain the steps involved in metal casting process with a simple sketches. (08 Marks)
b. List the types of patterns and explain any 3 types of pattern with sketches. (08 Marks)

OR

- 2 a. What is binder? Explain briefly the types of binder used in moulding sand. (08 Marks)
b. List the types of cores and explain any 3 types of cores with simple sketches. (08 Marks)

Module-2

- 3 a. With a neat sketch, explain the working principle of Jolt and squeeze moulding machine. (08 Marks)
b. With a neat sketch explain the working of sand slinger. (08 Marks)

OR

- 4 a. Explain the steps involved in shell moulding with simple sketches. (08 Marks)
b. Sketch and explain the constructional features and working principle of cupola furnace. (08 Marks)

Module-3

- 5 a. With a neat sketch explain the working principle of Tungsten Inert Gas (TIG) welding. (08 Marks)
b. With a neat sketch explain the working principle of Metal Inert Gas (MIG) welding. (08 Marks)

OR

- 6 a. Explain the submerged arc welding with a neat sketch. (08 Marks)
b. Sketch and explain the Atomic hydrogen welding. (08 Marks)

Module-4

- 7 a. Sketch and explain the thermit welding process. (08 Marks)
b. With a neat sketch explain the Electron beam welding process. (08 Marks)

OR

- 8 Write short notes on :
a. Residual stresses in welding b. Electrodes used in welding
c. Welding defects d. HAZ in welding (16 Marks)

Module-5

- 9 a. What is brazing? Explain the different methods of brazing with simple sketches. (08 Marks)
b. What is soldering? Compare the soldering and brazing process. (08 Marks)

OR

- 10 List the different Non Destructive Testing (NDT) and explain any three methods with neat sketches. (16 Marks)

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