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Third Semester B.E. Degree Examination, July/August 2022

Manufacturing Process – I

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Briefly explain the steps involved in casting with a neat diagram. (10 Marks)
b. What is pattern? With neat sketch explain any four types. (10 Marks)

OR

- 2 a. With a neat diagram explain the different types cores used in manufacturing process any 2 types. (10 Marks)
b. Write the principles of Gates and Risers with sketch. (10 Marks)

Module-2

- 3 a. With neat sketch explain the following : i) Jolt type ii) Squeeze type. (10 Marks)
b. Explain the steps involved in shell moulding and write any '3' advantages and disadvantages. (10 Marks)

OR

- 4 a. With neat sketch explain Thixo casting and slush casting. (10 Marks)
b. Draw and explain the basic principle of working electric resistance furnace. (10 Marks)

Module-3

- 5 a. Define welding process and classify it and write applications of melting process. (10 Marks)
b. With neat sketch explain the working principle of Metal Arc Welding (MAW). (10 Marks)

OR

- 6 a. Explain the working principle of Tungsten insert gas welding with a neat diagram. (10 Marks)
b. Explain the construction and working oxy – acetylene welding with a neat diagram. (10 Marks)

Module-4

- 7 a. Write short notes on : i) Electron beam welding ii) Spot welding. (10 Marks)
b. With a neat diagram, explain the working of Laser welding. (10 Marks)

OR

- 8 a. Explain the different welding defects their causes and remedies. (10 Marks)
b. Write short notes on Filler Rod and Fluxes. (05 Marks)
c. List out the parameters affecting heat affecting zone. (05 Marks)

Module-5

- 9 a. Differentiate soldering and brazing. (08 Marks)
b. Explain induction brazing and mention its advantages. (08 Marks)
c. Write any 3 advantages and limitations soldering. (04 Marks)

OR

- 10 a. What are different non-destructive testing methods and explain with neat sketches of magnetic particle inspection and Eddy current inspection. (15 Marks)
b. Write short notes on ultra sonic inspection method. (05 Marks)

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