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10MA844

Eighth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Welding Technology

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Define Welding. How are welding processes classified? (08 Marks)
b. Compare welding with casting and riveting. (04 Marks)
c. Explain with sketch Oxy – acetylene welding. State its advantages and disadvantages. (08 Marks)
- 2 a. Explain the following : i) Arc striking and maintaining ii) Voltage and current
iii) Arc stability and arc blow. (12 Marks)
b. Explain the types of power supplies. List their advantages and limitations. (08 Marks)
- 3 a. With a neat sketch, explain TIG welding process. State its advantages and limitations. (10 Marks)
b. With a neat sketch, explain thermit welding and electro slag welding process. (10 Marks)
- 4 a. With neat sketch explain projection welding. List their advantages. (08 Marks)
b. Explain flash butt welding along with its applications. (08 Marks)
c. List the advantage and applications of resistance welding. (04 Marks)

PART – B

- 5 a. With a neat sketch, explain Laser Beam welding process. (08 Marks)
b. With a schematic diagram, explain Friction Welding process. (06 Marks)
c. Write a note on Cold Welding processes. (06 Marks)
- 6 a. Explain the following : i) Grain size control ii) Internal stress control
iii) Corrosion control. (12 Marks)
b. With neat sketch explain HAZ. (08 Marks)
- 7 a. Explain the steps involved in Liquid penetrant test to detect the welding defects. (05 Marks)
b. With a sketch, explain the following inspection method to detect the welding defect :
i) Magnetic particle inspection ii) X – ray radiography inspection
iii) Ultrasonic inspection. (15 Marks)
- 8 a. Give the comparison of welding soldering and brazing. (12 Marks)
b. Write a note on :
i) Welding of dissimilar metals ii) Welding of plastics. (08 Marks)

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.