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10MA844

Eighth Semester B.E. Degree Examination, Jan./Feb. 2021
Welding Technology

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO full 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 advantage 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. Explain with sketch Spot welding and Seam welding process. State its applications. (10 Marks)
b. With sketch, explain Projection welding. State its advantages. (06 Marks)
c. Write a note on Flash butt welding and their application. (04 Marks)

PART – B

- 5 a. Explain Friction welding process. (06 Marks)
b. With neat sketch explain Oxy-acetylene flame cutting. (08 Marks)
c. Explain welding defects with their causes and remedies. (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 defects.
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)

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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.