



SHRI VISHWAKARMA SKILL UNIVERSITY

(A State Skill University, setup by an Act of Legislature in 2016)

187022

Course : B.Voc. Robotics and Automation
Subject : Welding Technology
Subject Code : DBME -101
Semester : First
Duration : 3 Hours
Maximum Marks : 35

Instructions to the Students

1. This Question paper consists of two Sections. All sections are compulsory.
2. **Section A** comprises ten questions of objective type in nature. All questions are compulsory. Each question carries one mark.
3. **Section B** comprises eight essay type questions out of which students need to do any five. Each question carries five marks.
4. Read the questions carefully and write the answers in the answer sheets provided.
5. Do not write anything on the question paper.
6. Wherever necessary, the diagram drawn should be neat and properly labelled.

Roll Number

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SECTION -A (OBJECTIVE TYPE QUESTIONS)

(10x1=10 Marks)

For the following objective type questions, write your response (a), (b), (c) or (d). All questions carry equal marks.

1. The welding process in which metals are heated to the molten state and allowed to solidify in presence of filler material is:
(a) fusion welding (b) forged welding (c) plastic welding (d) flash welding
2. Filler metal is used in:
(a) projection welding (b) spot welding (c) seam welding (d) gas welding
3. The current value in the arc welding is decided by:
(a) plate thickness (b) electrode size (c) speed of travel (d) weld length
4. The arc in the arc welding is created by:
(a) current (b) voltage (c) Contact resistance (d) frequency
5. In arc welding, eyes needs to be protected against:
(a) sparks (b) UV rays (c) IR rays (d) all the three
6. The welding zone in TIG arc welding is shielded by an atmosphere of:
(a) oxygen gas (b) carbon-di-oxide (c) helium (d) hydrogen
7. Which of the following welding process uses consumable electrodes:
(a) MIG (b) laser (c) thermit (d) TIG
8. Which welding process is used for car bodies:
(a) resistance (b) gas (c) arc (d) thermit
9. Welding of steel structures on site of a building is done by:
(a) resistance welding (b) thermit welding (c) gas welding (d) arc welding
10. Identify the welding process used in tins of vegetable oils:
(a) resistance welding (b) seam welding (c) gas welding (d) arc welding

SECTION -B (ESSAY TYPE QUESTIONS)

(5x5=25 Marks)

1. (a) Explain fusion welding and solid phase welding in brief? What are the advantages of welding joints over other joints?
(b) Write steps involved in executing welding. Also draw neat sketches of commonly used welding joints.
2. (a) What is resistance welding? Explain. Also give classification of resistance welding.
(b) Explain projection welding and seam welding with the help of neat sketches.
3. (a) Explain principle of operation of oxyacetylene gas welding. Also discuss advantages and disadvantages of gas welding.
(b) Discuss various types of welding flames with the help of neat sketches. Also discuss their applications.
4. (a) Discuss various arc welding equipments. Also discuss precautions to be observed in arc welding.
(b) What is submerged arc welding? Also discuss its advantages and limitations.
5. (a) Explain Electron beam welding and discuss its advantages.
(b) Explain thermit welding and friction welding in brief.
6. (a) What are various defects in welding joints? Discuss their causes and remedies.
(b) Discuss ultrasonic welding in brief.
7. (a) Discuss gas-tungsten arc welding (GTAW or TIG) in brief.
(b) Explain forge welding and its types in brief.
8. Write short note on any five:
 - (a) Electrodes in arc welding
 - (b) Laser welding
 - (c) MIG welding
 - (d) Coating materials and their importance
 - (e) Gas welding equipments
 - (f) Percussion welding

-----End of Paper-----