

- (b) Transverse type
(c) Angular type
(d) Circular type
- 1-d. Which of the following defects occur due to flux employed and electrode coating? [CO4] 1
(a) Inclusion of slag
(b) Inadequate penetration
(c) Incomplete fusion
(d) Porosity
- 1-e. Low welding current in arc welding would result in.. [CO5] 1
(a) Excessive piling up of weld metal, poor penetration, wasted electrodes
(b) Excessive spatter, under cutting along edges, irregular deposits, wasted electrodes
(c) Too small bead, weak weld, and wasted electrodes
(d) None of the above

2. Attempt all parts:-

- 2.a. What is the source of welding heat in Thermit welding? [CO1] 2
2.b. What is distortion? [CO2] 2
2.c. Explain Gas pressure bonding? [CO3] 2
2.d. Define root gap? [CO4] 2
2.e. Explain the process of Needle Arc Micro Plasma Welding. [CO5] 2

SECTION B

20

3. Answer any five of the following:-

- 3-a. What is the effect of clearance in brazing? [CO1] 4
3-b. Discuss estimation of cost for shielded metal arc welding process. [CO1] 4
3-c. What are weldability considerations while welding Austenitic Stainless steel? [CO2] 4
3-d. Explain Oxy-acetylene welding process used for Aluminium? [CO2] 4
3.e. What is Continuous drive friction welding? Write its advantages? [CO3] 4
3.f. The filler metal composition matters in its selection in welding, explain. [CO4] 4
3.g. What is meant by manipulator design in welding robot? [CO5] 4

SECTION C

35

4. Answer any one of the following:-

- 4-a. Define polarity as applied to DC arc welding. How is this advantageously used? [CO1] 7
- 4-b. Differentiate between welding and mechanical fastening. [CO1] 7
- 5. Answer any one of the following:-**
- 5-a. What types of defects can be detected in a liquid penetrant test? [CO2] 7
- 5-b. What is meant by dwell and development time with respect to liquid penetrant testing? [CO2] 7
- 6. Answer any one of the following:-**
- 6-a. What is the principle of induction welding? Write its advantages, disadvantages and its applications? [CO3] 7
- 6-b. Explain Friction Stir Welding? What are its advantages, disadvantages and its applications? [CO3] 7
- 7. Answer any one of the following:-**
- 7-a. What is quality assurance in weld joint? [CO4] 7
- 7-b. Explain the flame spraying metallising process. [CO4] 7
- 8. Answer any one of the following:-**
- 8-a. Explain about robot welding [CO5] 7
- 8-b. What is meant by interfacing with periferal equipment in welding robotic design? [CO5] 7