Unit-II

Electric Welding and Electrolysis

1. Electric welding is a process used to:

A) Separate metals
B) Join two or more metal pieces permanently
C) Measure resistance
D) Generate electricity

Answer: B) Join two or more metal pieces permanently

2. The equipment used to supply power for welding is called:

A) Transformer
B) Welding Machine
C) Alternator
D) Rectifier Only

Answer: B) Welding Machine

3. In resistance welding, heat is generated due to:

A) Arc formation
B) Chemical reaction
C) I^2R losses at the contact surfaces
D) Solar radiation

Answer: C) I^2R losses at the contact surfaces

4. Which of the following is a type of resistance welding?

A) Spot Welding
B) Seam Welding
C) Projection Welding
D) All of the Above

Answer: D) All of the Above

5. Arc welding uses:

A) Electrostatic field
B) Electric arc between electrode and workpiece
C) Magnetic field only
D) Chemical heating only

Answer: B) Electric arc between electrode and workpiece

6. The temperature of an electric arc in arc welding is approximately:

A) 500°C
B) 1000°C
C) 3000–6000°C
D) 100°C

Answer: C) 3000–6000°C

7. Which welding method is commonly used for joining sheet metals?

A) Spot Welding
B) Arc Welding
C) Induction Welding
D) Gas Welding

Answer: A) Spot Welding

8. In arc welding, the electrode may be:

A) Consumable or non-consumable
B) Only non-consumable
C) Only consumable
D) Mechanical only

Answer: A) Consumable or non-consumable

9. One advantage of DC welding over AC welding is:

A) Less stable arc
B) Better arc stability
C) Lower efficiency always
D) Higher noise level

Answer: B) Better arc stability

10. One advantage of AC welding over DC welding is:

A) Lower equipment cost
B) Higher maintenance
C) Poor transformer efficiency
D) Less portability

Answer: A) Lower equipment cost

11. Which welding supply suffers less from arc blow?

A) DC Welding
B) AC Welding
C) Battery Welding
D) Resistance Welding

Answer: B) AC Welding

12. Electrolysis is the process of:

A) Producing heat by resistance
B) Chemical decomposition by electric current
C) Mechanical separation
D) Magnetic separation

Answer: B) Chemical decomposition by electric current

13. The substance that conducts electricity in electrolysis is called:

A) Electrode
B) Insulator
C) Electrolyte
D) Capacitor

Answer: C) Electrolyte

14. The positive electrode in an electrolytic cell is called:

A) Cathode
B) Anode
C) Rotor
D) Collector

Answer: B) Anode

15. Electroplating is the process of:

A) Removing metal coating
B) Depositing a thin layer of metal on another metal
C) Melting metal
D) Cutting metal

Answer: B) Depositing a thin layer of metal on another metal

16. Which of the following is a common application of electroplating?

A) Gold plating of jewelry
B) Wind power generation
C) Battery charging
D) Arc heating

Answer: A) Gold plating of jewelry

17. Aluminium is extracted industrially by:

A) Resistance heating
B) Electrolytic process
C) Induction heating
D) Arc welding

Answer: B) Electrolytic process

18. Electromagnetic stirring is mainly used in:

A) Metal processing industries
B) Water treatment
C) Refrigeration systems
D) Solar cells

Answer: A) Metal processing industries

19. The purpose of electromagnetic stirring is to:

A) Increase corrosion
B) Improve mixing and uniformity of molten metal
C) Reduce conductivity
D) Stop metal flow

Answer: B) Improve mixing and uniformity of molten metal

20. Which law governs the amount of substance deposited during electrolysis?

A) Ohm's Law
B) Faraday's Laws of Electrolysis
C) Kirchhoff's Law
D) Coulomb's Law

Answer: B) Faraday's Laws of Electrolysis

Fill in the Blanks – Electric Welding and Electrolysis (15 Questions with Answers)

1. **In electric welding, heat is produced by an electric _____.**
   Answer: arc
2. **Arc welding is widely used for joining _____ materials.**
   Answer: metallic
3. **Resistance welding generates heat due to the _____ of the workpiece.**
   Answer: resistance
4. **Spot welding is a type of _____ welding.**
   Answer: resistance
5. **In arc welding, the electrode and workpiece are connected to a power _____.**
   Answer: source
6. **AC welding equipment operates on _____ current.**
   Answer: alternating
7. **DC welding equipment operates on _____ current.**
   Answer: direct
8. **Compared to AC welding, DC welding provides a more _____ arc.**
   Answer: stable
9. **The process of depositing a metal coating on another metal by electrolysis is called _____.**
   Answer: electroplating
10. **Electrolysis is based on the movement of _____ in an electrolyte.**
    Answer: ions
11. **The electrode connected to the positive terminal is called the _____.**
    Answer: anode
12. **The electrode connected to the negative terminal is called the _____.**
    Answer: cathode
13. **Extraction of aluminum from alumina is carried out by the _____ process.**
    Answer: electrolytic
14. **Electroplating is commonly used to improve _____ resistance of metals.**
    Answer: corrosion

15. **Electromagnetic stirring is used in metal processing to improve the _____ of molten metal.**
    Answer: uniformity

Additional Fill in the Blanks (Practice)

16. **The electric arc temperature may exceed _____ °C.**
    Answer: 5000

17. **Seam welding is used for making _____ joints.**
    Answer: continuous

18. **During electrolysis, reduction occurs at the _____.**
    Answer: cathode

19. **Copper plating is a common example of _____.**
    Answer: electroplating

20. **Electromagnetic stirrers operate based on the principle of _____ force.**
    Answer: electromagnetic

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