## Section-3

Q2 Ans * Resistance Welding:- is a welding technology widely used in manufacturing industry for joining metal sheet and components. The weld is made by Conducting a Strong Current through the metal Combination to heat up and finally melt the metal at localized Point Predetermined by the design of the electrodes and the workpieces to be welded. A force is always applied before, during and after the application of Current to Confine the Contact area at the weld interfaces and, in Some applications, to forge the work pieces.

* HAZ in welding:- The heat affected Zone (HAZ) is a non-melted area of metal that has undergone changes in Material Properties as a result of being exposed to high temeratures. These Changes in Material Property are usually as a result of welding or high-heat Cutting. The HAZ is the area between the weld or cut and the base, parent metal.

Sections

* Submerged welding:- It is a common arc welding process that involves the formation of an arc between a continously fed electrode and the workpiece. A blanket of powdered flux generates a protective gas shield and a slag which protects the weld zone.

* Brazing & Soldering differences:-

| Brazing | Soldering |
|---|---|
| → Brazing has melting point above 800 f (427c) | → filler metal used in soldering as a melting points less than 800 f (427c). |
| → Brazing Produces joints stronger than soldering | → Soldering joint are weaker |
| → Brazing joints resists corrosion | → Solder joints do not resist corrosion to the some extent. |
| → Brazing is mainly used to join all kind of metals in industry such as automotive industry | → Soldering is mainly used in the electrical industry for Permanent connection between the electronic components. |