

## Section-3

Ques. 1) What is shearing and forming in manufacturing. Define the term joining in manufacturing.

Ans. • Shearing, also known as die cutting, is a process which cuts stock without the formation of chips or the use of burning or melting. Strictly speaking, if the cutting blades are straight the process is called shearing; if the cutting blades are curved then they are shearing type operations.

- Date: / /
- Forming, metal forming, is the metal working process of fashioning metal parts and objects through mechanical deformation; the workpiece is reshaped without adding or removing material, and its mass remains unchanged. Forming operates on the materials science principle of plastic deformation, where the physical shape of a material is permanently deformed.

Joining processes are characterized by their ability to fuse or "join" two or more components for the purpose of creating a different object, such as a ready-to-sell customer product. Most materials can be joined - and they are typically multiple ways to join them.