Que:- What is manufacturing process?
Ans:- Manufacturing is the conversion of raw materials into useful product by the application of machines and tools.

- Technologically :- Physical and chemical process is to alter size, shape and properties of material suitable for service use.

- Economically :- A step to convert raw material into useful product of high value.

Que:- What is the importance of workshop layout?
Ans:- Improving workshop layout saves most money in processes where the products or material used are large and heavy, such as sheet metal working and woodworking. In joinery the saving from improved layout can be dramatic, because woodworking machines cut timber very fast.

Qu:- Difine the following:-

(i) Elasticity :- The ability of a material to deform under load and return to its original shape when the load is removed.

(ii) Plasticity :- The ability of a material to deform under load and retain its new shape when the load is removed.

(iii) Ductility :- It is the ability of a material to be deformed plastically without rupture under tensile load.

(iv) Malleability :- It is the ability of a material to be deformed plastically without rupture under compressive load.

(v) Brittleness :- It is the property of sudden fracture without any visible permanent deformation.

(vi) Strength :- It is defined as the ability of a material to resist load without failure.

(vii) Toughness :- It is defined as the ability of the material to absorb energy up to fracture during the plastic deformation.

(viii) Hardness :- It is defined as the ability of a material to resist scratching or indentation by another hard body.

Que :- Write short notes on plain carbon steel and high speed steel.

Ans :- Plain Carbon Steel :- Carbon steel or plain carbon steel, is a metal alloy. It is a combination of two elements, iron and carbon. Other element are present in quantities too small to affect its properties. The only other elements allowed in plain carbon steel are :-

Manganese (1.65%), Silicon (0.60%) and Copper (0.60%)

High Speed Steel :- HSS is a subset of tool steels, commonly used as cutting tool material. It is often used in power-saw blades and drill bits. It is superior to the older HSS tools used extensively through the 1940s in that it can withstand higher temperature without losing its temper (hardness)