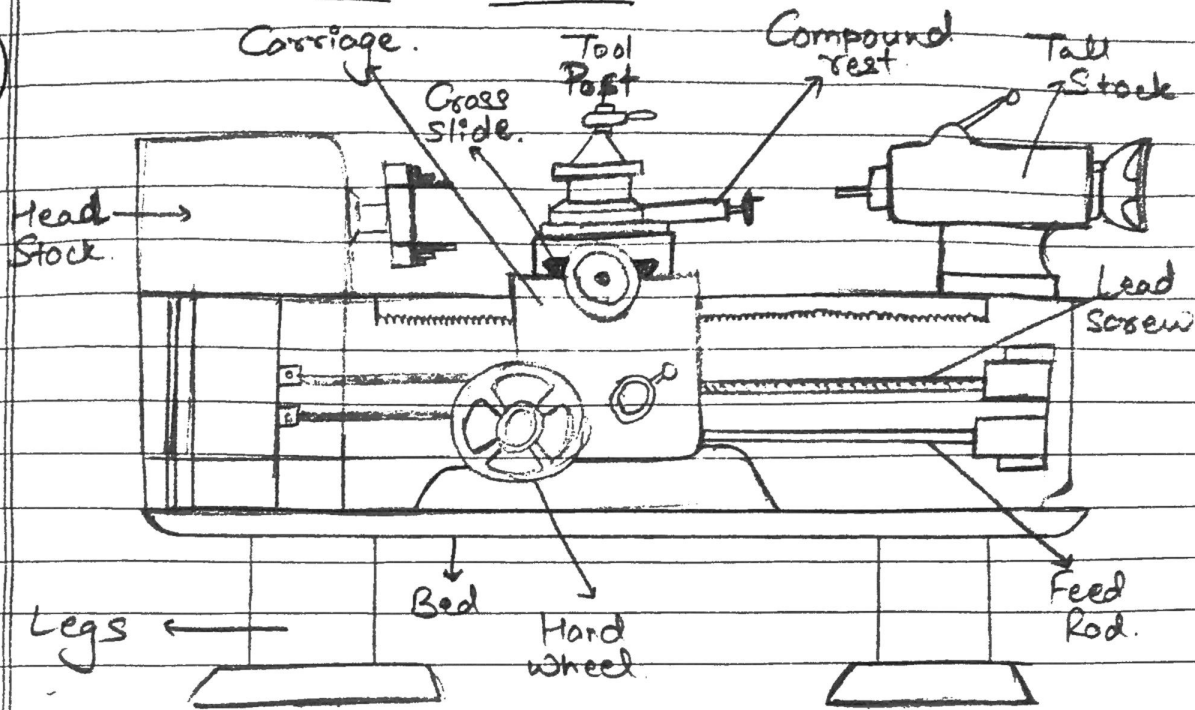


Lathe Machine.

(Q1.)



(Q2.) Give the brief information of lathe operations:

Ans.) (1.) Turning: It is removal of material from the outer outside diameter of a cylindrical job to obtain one or more finished diameters. Usually there are three types of turning which are:

- Plain or straight or parallel turning.
- Stepped turning.
- Taper turning.

In plain turning machining is done in this way that after removal of material, finished diameters at both the ends of

length remain equal. Turning operation where the entire length is divided in steps of different diameters but each step individually finished by using plain turning is called Stepped turning. Taper turning is the operation in which the material is removed from the job. to produce a conical shape.

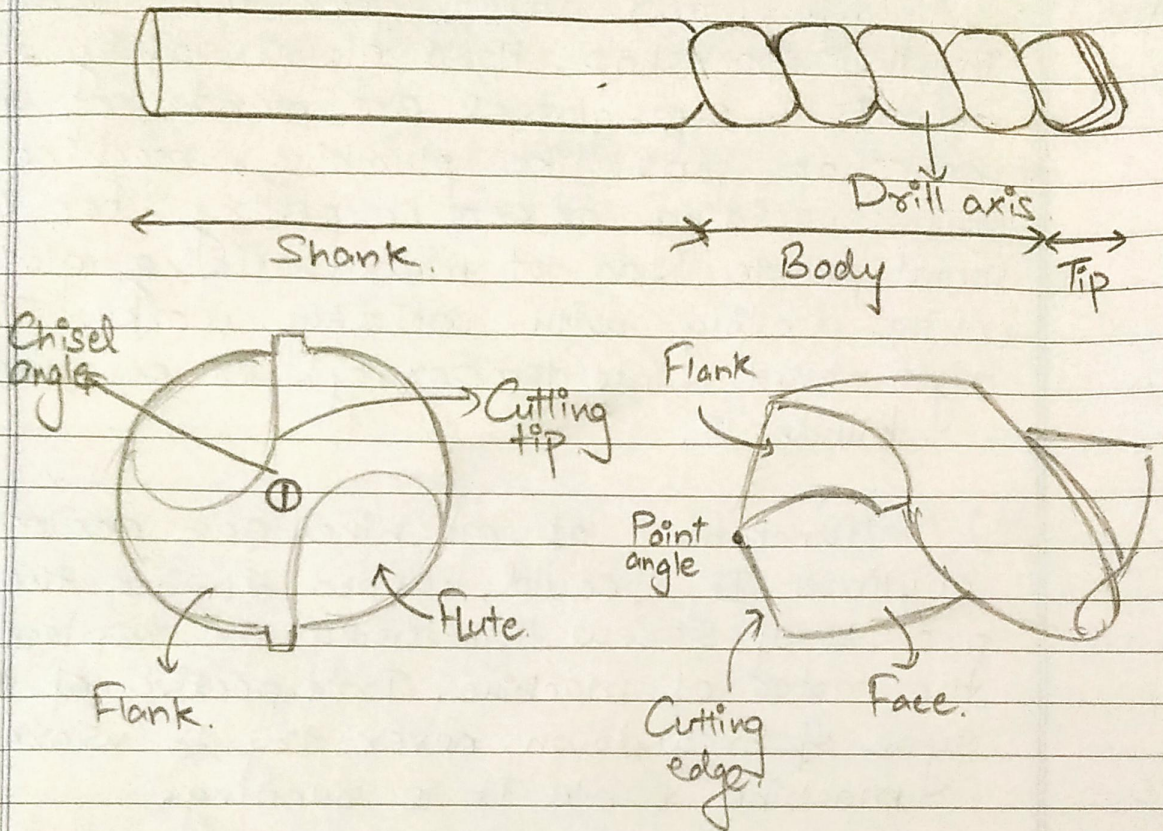
② Facing: It is the machining of the ends of a work piece to make the ends smooth. For this operation, the cutting tool is fed perpendicular to the lathe or workpiece axis by means of cross slide.

③ Parting off: This operation involves cutting the work-metal into two parts using parting off tool. Feed to the cutting tool is given in same manner as in case of facing operation.

④ Grooving: This operation is also denoted as necking. Usually, grooves are cut on a cylindrical surface in narrow shape by means of grooving tool. The cutting edge of grooving tool is kept narrow.

⑤ Drilling: For making a standard size of hole in a workpiece by means of drill is known as drilling operation. For this operation, drill is held in tail stock spindle.

(Q3.) Draw a neat sketch of twist drill and show its parts.



(Q4.) List of machines available in our college workshop.

Ans.) Machines available in our college workshop are as follows:

- i.) Grinding machine.
- ii.) Shaping machine
- iii.) Milling machine
- iv.) Lathe machine.

(Q5.) Write down the safety precautions while working in machine shop.

(Ans.) i.) Always wear safety gear while working in the workshop. Hand gloves, safety shoes, helmets & eye-glasses are mandatory for workshop jobs like plumbing, machine fitting, welding or even carpentry. For instance, some people do not wear welding glasses while dealing with welding works. This might result into temporary or permanent blindness.

ii.) Malfunctioning of machine can occur anytime. It could happen during the process of screw tightening or replacing the motor of machine. Irrespective of the type of breakdown, never try to work on machine while it is running.

iii.) While dealing with vehicles, always ensure that common safety guidelines are observed. Pull the hand brake, choke the rear wheel, and fit fender covers. Always jack the vehicle on hard surface.

iv.) Non-slip mats should be used in front of machines where necessary and machines should be sensibly placed to avoid overcrowding.

v.) Maintain all service records of machines and equipments. It will not only save time but also help you to take care of ~~resp~~ repetitive breakdowns.

vi.) Smoking & Drinking should be prohibited in the workshop.