

Automobile : → An automobile is a self-propelled vehicle driven by an internal combustion engine and is used for transportation of passengers and goods on ground. Example Bus, car, Jeep, truck, tractor, scooter, motor cycle.

The modern automobile, in general, is essentially a transportation equipment unit. It consists of a "frame" supporting the "body" and certain "power developing and transmitting units" which are further supported by "tyres" and "wheels" through "springs and axles".

An engine supplies the power, which is delivered by the "transmission systems" to the wheels through the clutch or fluid coupling.

Automobile engineering : → Automobile or automotive engineering is a branch of engineering in which we study all about the automobiles and have practice to propel them.

Mobile or motive : Means one which can move. Automobile or automotive means one which itself can move.



# PARTS OF AN AUTOMOBILE

Every automobile consists of the following two main parts:

- ① Machine Portion
- ② Carriage portion i.e., Body.

Machine Portion: Every automobile irrespective of its country of manufacture or model consists of the following three basic units:

- ① The Chassis and transmission
- (ii) The engine
- (iii) The electrical equipment.

## Chassis:

This part of the automobile supports its body, engine and transmission system.

The automotive chassis includes the following:

- (i) The frame
- (ii) Springs and shock absorbers.
- (iii) Brakes
- (iv) Tyres and wheels.

## Transmission:

This unit transmits the power from the engine to the wheels.

It consists of the following:

- ① Clutch

- ② Gear box
- ③ Universal joint.
- ④ Final drive
- ⑤ Axles and differential.

The Engine: An engine in an automobile is the source of power. A petrol engine consists of the following four basic systems

① Fuel System: This system mixes petrol with air in the right proportion to give a mixture which when burnt produces pressure. This pressure is then used to move the pistons.

② Ignition System: This system of the engine provides regular sparks to set fire to the mixture coming from the fuel system.

③ Lubricating System: This system lubricates the moving parts of the engine so that they can work smoothly.

④ Cooling System: This system with the help of water cools the engine and prevents it from getting hot.