

a) 1826 - Anyos zedlike field patent for his
indigenous electric motor

b) 1886 - Very first EV to undergo
production in England by
Thomas Pashley

After 1910 - * Assembly line production of
gasoline engine by Henry Ford
* 1912 Chevrolet first self
start mechanism.

* World War

low range of EV

Charging time

low reliability in war zone

1991 - LEVI

All manufacturers are compelled
to produce an EV
alternative to market

1997 - Toyota Prius launched

- ~~IDE~~ LEVI II

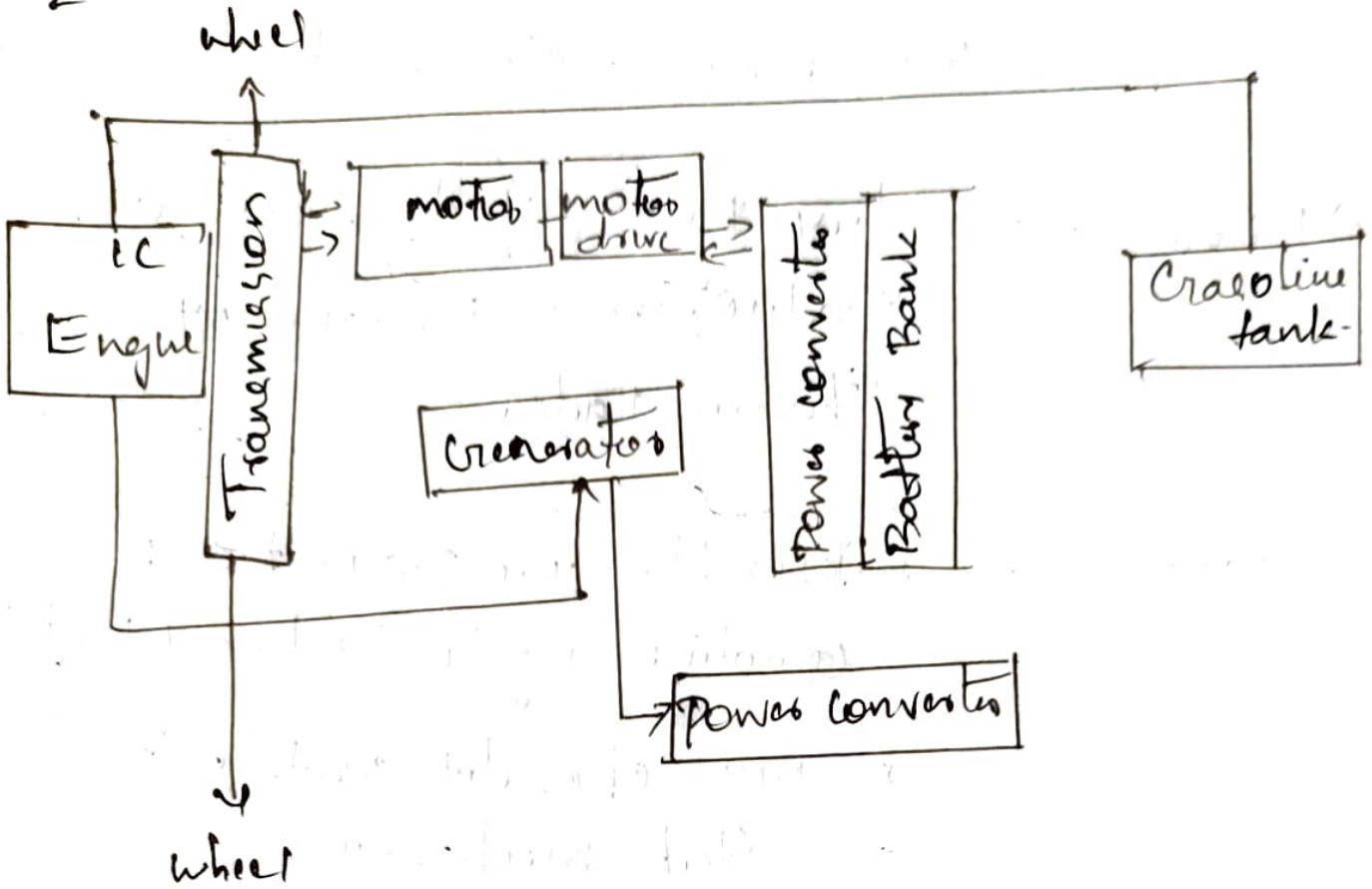
2003

2006

- Tesla Roadster

Q)
2

HEV Series



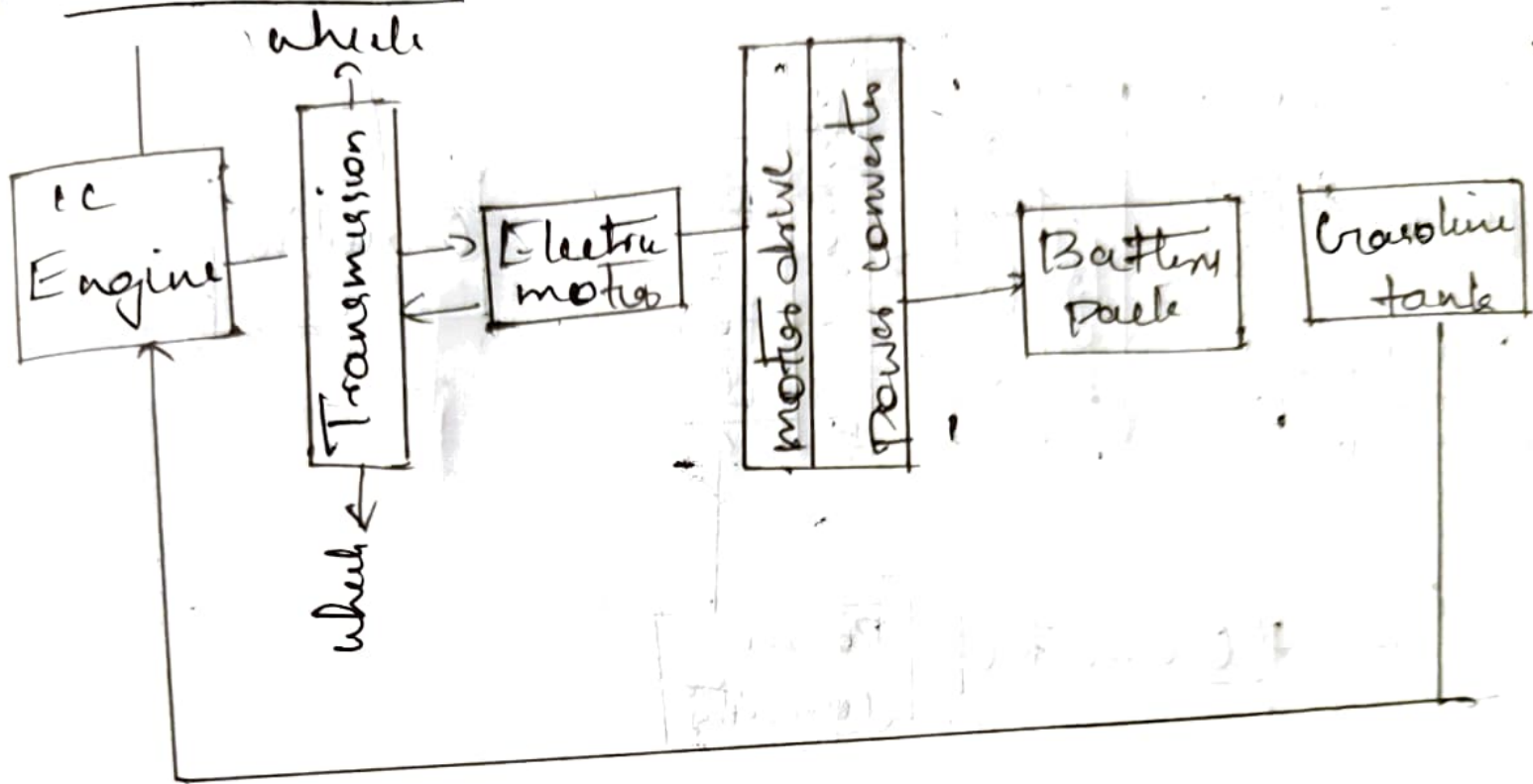
Advantage

- more efficient
- less fuel consumption
- less emission

Disadvantage

- Battery Pack is larger in size
- more ~~weight~~ weight
- less power

b) Parallel IHE V



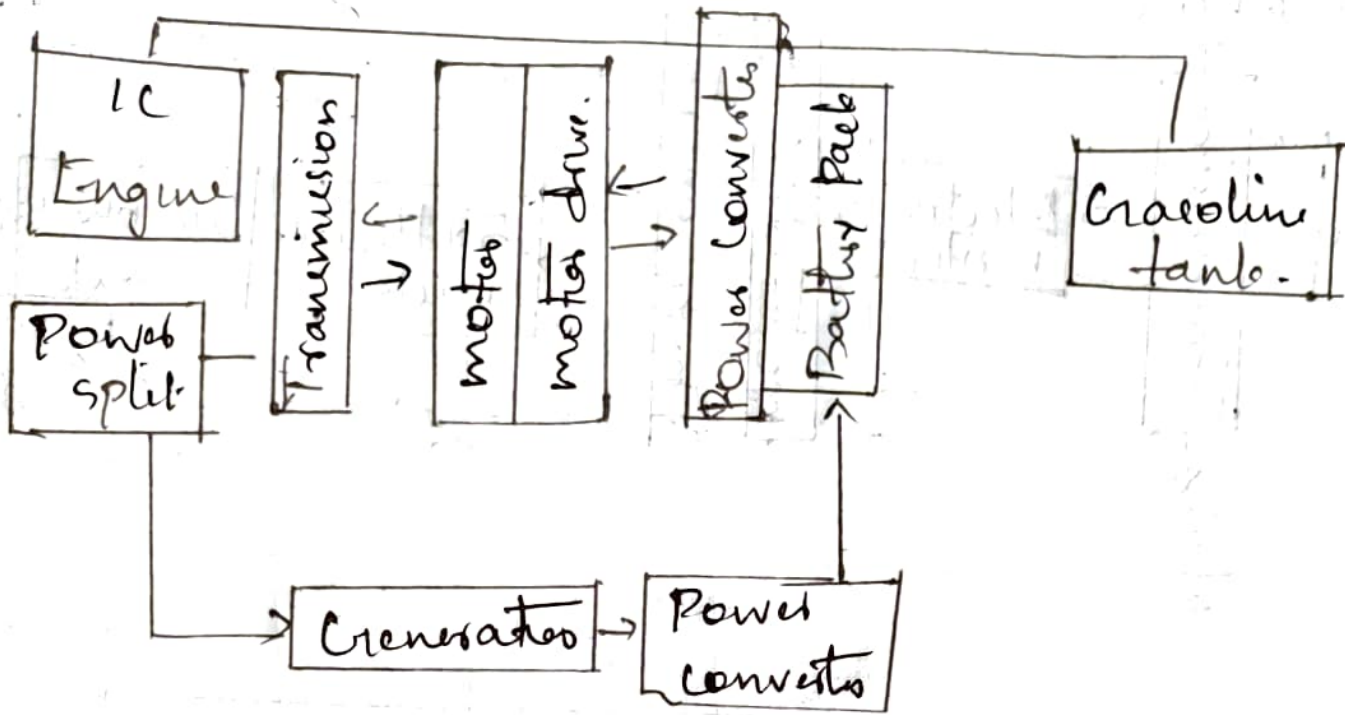
Advantages

- more fuel efficient
- Can be driven based on various cases
- Regenerative braking

Disadvantages

- more complicated
- more powerful

c) Series Parallel HEV



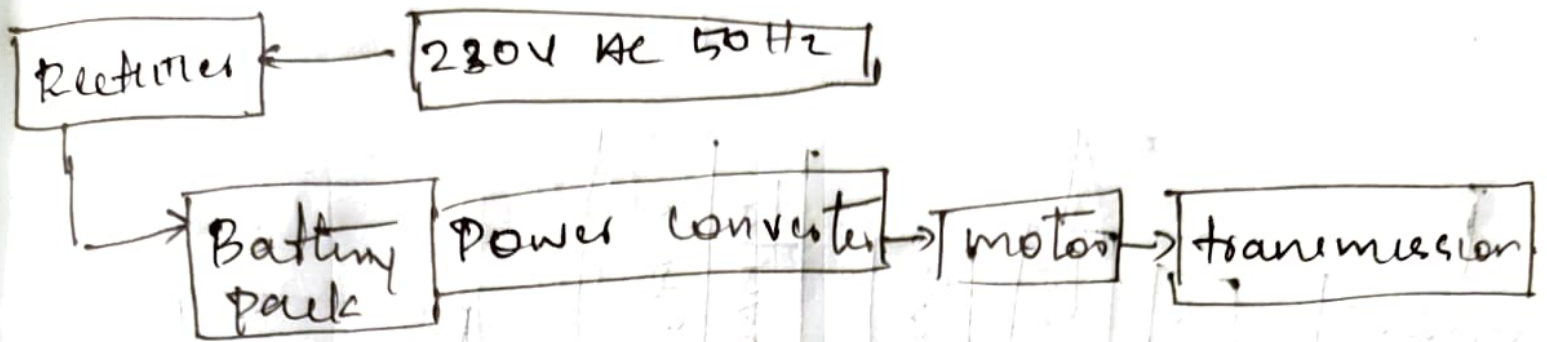
Advantages

- Regenerative braking.
- more fuel efficiency.
- most practicable method.

Disadvantage

- more complicated
- low reliability
- more E waste

d) Plugin EV



Advantages,

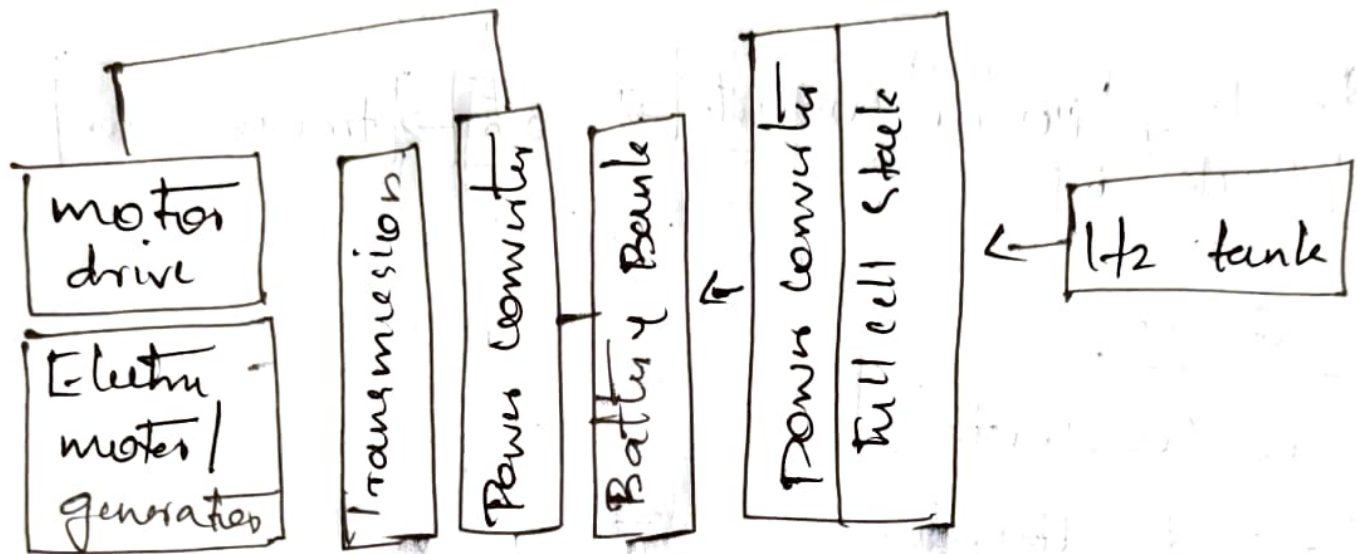
- more convenient.
- Easy to handle
- less Pollution

Disadvantage

- There will not be power supply where ever you go
- You have to carry the chords during travel
- You have to wait untill it get charged.



e) Fuel cell electric vehicle (FCEV)



Advantage

- more Efficient.
- Instant power

Disadvantage,

- H2 fuel is very costly.
- Difficult to handle H2 fuel

Q3) BLDC motor

BLDC stands for brushless dc motor

Construction

The construction of this motor has many similarities of three phase induction motor as well as conventional DC motor

• It has rotor and stator

• It consist of stacked steel laminations to carry the windings. These windings are placed in slots which are axially cut along the inner periphery of the stator. These windings can be arranged in either star or delta.

• However most BLDC motor have three phase star connected stator

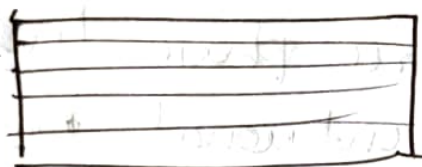
Permanent magnet

rotor



Hall effect sensor

Stator



Stator