Q India's energy transition requires complementary technology solutions for achieving carbon emission reduction goals on a long term. Analyse.

Ans India is the third largest emitter of carbon dioxide (CO_2) in the world after that U.S. and China. for reduction of carbon India needs to some steps to reduced the emmision of carbon.

Some specific points needs to achieving goals is as follows:-

(i) The global automotive landscape is transforming amid growing concerns on reducing carbon emmissions.

(ii) for this issue paradigm shift to electrification from traditional Internal Combustion Engine (ICE) vehicles is gaining momentum in many countries across the world.

(iii) India, too, has taken steps towards adoption of BEVs/ battery electric vehicles with a focus on two and three wheelers, buses and public/ shared mobility.

(iv) There is no 'one size fit all' approach

the strategies and policies for technological transition should be aligned to each nation's unique context and its priorities.

(iv.) India's distinctive national objectives include fostering sustained high economic growth anchored on self-reliance through local manufacturing and net import reduction.

(v) As per IEA, during 2019-40 the energy demand and carbon emissions from road transport in India are likely to more than double along with oil import dependence increasing to 90%.

(vi) India will need to promote mass electrification by leveraging all electrified technologies (xEV) alternate fuels and hydrogen fuel technologies for realising reduction of oil import.

Thus we can India needs also to promote electrified vehicles uses at large scale to achieve the goal at required time.