

1.

Suggest a suitable type of body layout configuration and body construction type for an executive **Sedan car** keeping in mind the current safety regulations and requirements.

2.

What is crashworthiness of the vehicle? Explain in detail various safety systems to ensure occupants safety in an automobile to mitigate the crash energy till the vehicle come to rest. Also derive the expression for mitigation of kinetic energy of crash.

3.

What is active safety? Briefly discuss any five technologies to improve active safety of a vehicle for various road and environment conditions.