



12. (a) (i) Enlist the merits and demerits of Electronic fuel injection system. (8)
- (ii) Briefly explain the electronic diesel injection system with necessary controls. (8)

Or

- (b) (i) Explain engine emission control system. (8)
- (ii) Explain a turbocharger with a neat sketch. (8)
13. (a) Explain briefly the following :
- (i) Conventional differential. (5)
- (ii) Power lock differential. (5)
- (iii) Double reduction type differential. (6)

Or

- (b) Describe the construction and working of an over drive with a neat sketch and list out its advantages.
14. (a) Write short note on
- (i) Steering gear mechanisms
- (ii) Steering geometry
- (iii) Power steering.

Or

- (b) (i) Compare and contrast Pneumatic and hydraulic braking systems. (6)
- (ii) Explain the elements, types and stages of a suspension system. (10)
15. (a) Explain in detail about the electrical vehicle system with a block diagram.

Or

- (b) Explain the modifications required in SI and CI engines to employ alternate fuels to produce on par performance, combustion and emission characteristics of conventional engines.