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**Question Paper Code : 51100**

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2014.

Sixth Semester

Automobile Engineering

AT 2353/AU 63 — TWO AND THREE WHEELERS/TWO AND THREE WHEELED  
VEHICLES

(Regulation 2008/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Differentiate symmetrical and unsymmetrical port timing.
2. Define scavenging.
3. Name different types of two wheeler mainframe construction.
4. What are the objectives of gear box required in automobiles?
5. How are tires specified?
6. Define leading and trailing.
7. Differentiate scooters and mopeds.
8. Enumerate special features of Enfield motor cycle.
9. Discuss the reasons of high fuel consumption in 3- wheelers.
10. What are the major types of three wheelers available in the Indian market?

PART B — (5 × 16 = 80 marks)

11. (a) Explain with suitable sketches the working of a two stroke and four stroke SI Engine with Relative merits and demerits.

Or

- (b) Describe in Detail the construction and Working principle of an Electronic Ignition System. Explain also its advantages over the magneto coil ignition system.

12. (a) Where and why do we use multiplate clutches? Explain the constructional features and Working of multiplate clutch.

Or

- (b) Explain in detail the function and construction of telescopic shock absorbers and show how it is mounted on two wheeler.
13. (a) Describe in detail about construction and working of disc brakes. Compare them with the conventional drum type brakes.

Or

- (b) Discuss with the help of neat sketches, the construction of various types of disc wheels used in Motorcycles and scooters.
14. (a) Compare the technical specifications of various 100cc two wheeler and discuss the Superiority of one over the other.

Or

- (b) Describe the service and maintenance schedule of a typical two wheeler and prepare a maintenance schedule for
- (i) 500 km
  - (ii) 2500 km
  - (iii) 5000 km
  - (iv) 9000 km
15. (a) Draw the layout of auto-rickshaw and name its parts and their functions. Considering the Indian models of three wheelers discuss the merits and demerits of any two three wheeler models.

Or

- (b) Write short notes on
- (i) Fault tracing in Auto rickshaws (4)
  - (ii) Pickup van (4)
  - (iii) Delivery van (4)
  - (iv) Trailer (4)