

G 1499

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Reg. No.....

Name.....

B.TECH. DEGREE EXAMINATION, MAY 2016

Sixth Semester

Branch : Mechanical Engineering

ME 010 606 L03—AUTOMOBILE ENGINEERING (Elective I) (ME)

(New Scheme—2010 Admission onwards)

[Regular/Supplementary]

Time : Three Hours

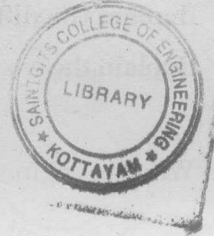
Maximum : 100 Marks

Part A

Answer all questions.

Each question carries 3 marks.

1. Explain any three classifications of engines.
2. What is the function of a Gear box in an automobile ?
3. Differentiate between toe in and toe out.
4. What do you mean by ABS ?
5. What is the need for an electrical system in an SI engine ?



(5 × 3 = 15 marks)

Part B

Answer all questions.

Each question carries 5 marks.

6. What do you mean by CRDI? How does it improve the efficiency of the engine ?
7. With a neat sketch explain the working of a universal joint.
8. Explain the working of a gas charged shock absorber.
9. Sketch the layout of a hydraulic braking system
10. What is a Bendix drive ?

(5 × 5 = 25 marks)

Part C

Answer all questions.

Each question carries 12 marks.

11. Explain the various types combustion chambers used in IC engines.

Or

12. Explain rolling resistance, air resistance and grade resistance with respect to a moving vehicle. What do you mean by gradability of a vehicle ?

Turn over

13. What is the function of a clutch ? Explain the working of a centrifugal clutch with a neat sketch.

Or

14. Explain the working of a differential ? Explain the differential action when the wheel is on a slippery ground ?

15. What is the function of a steering gear box ? Explain any two types.

Or

16. What is the necessity of wheel balancing and wheel alignment ? What is the importance of king pin inclination ?

17. Explain the working of a pneumatic braking system. What are its advantages ?

Or

18. Explain the different causes of tyre wear. How are tyres classified based on ply arrangements ?

19. Explain the working of a battery ignition system circuit. Compare it with electronic ignition system.

Or

20. What is engine testing ? Explain the steps in preventive and breakdown maintenance.

(5 × 12 = 60 marks)

