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SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)

B.Tech III Year I Semester Regular & Supplementary Examinations Nov/Dec 2019

AUTOMOBILE ENGINEERING
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

(Answer all Five Units 5 x 12 = 60 Marks)

UNIT-I

- 1 a Write the functions of the following engine components. 5M
(i) Piston (ii) Connecting rod (iii) Crank shaft (iv) Valves (v) Cylinder.
- b What is Combustion? Explain the different types of Combustion Process. 7M

OR

- 2 a What is the difference between rear wheel drive and front wheel drive? Explain. 6M
- b Explain the direct injection type combustion chamber in C.I Engine. 6M

UNIT-II

- 3 a Explain briefly about MPFI fuel supply system used in Automobiles with neat sketch. 8M
- b What are the advantages and disadvantages of turbocharging? 4M

OR

- 4 a Name various types of emissions produced from diesel and petrol engines and also mention the reasons for their production. 8M
- b Discuss the effects of emissions on human health. 4M

UNIT-III

- 5 a What are the different types water cooling systems used in an automobile? Explain any one of it with neat diagram. 9M
- b State the necessity of Engine cooling system. 3M

OR

- 6 a Explain with the help of a neat diagram about working of a magnetic coil ignition system. 8M
- b Explain about any one type of Lubrication Filters. 4M

UNIT-IV

- 7 a What are the different types of clutches used in an automobile? Explain any one of them with neat diagram. 8M
- b Discuss in detail about the torque converter. 4M

OR

- 8 a Explain in details about Differential used in automobile with neat diagram. 8M
- b Discuss in detail about propeller shaft. 4M

UNIT-V

- 9 a Briefly explain about the Davis Steering Mechanism with neat sketch. 6M
- b Explain in detail about Vacuum Braking system with neat sketch. 6M

OR

- 10 a With a neat sketch working of air Braking System. 6M
- b Discuss clearly about Steering Mechanism. 6M

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