

**Reg. No:**

**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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