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

**B.Tech III Year I Semester Supplementary Examinations Feb-2021**

**AUTOMOBILE ENGINEERING**

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a What is Combustion? Explain the different types of Combustion Process. 6M  
b Explain the direct injection type combustion chamber in C.I Engine. 6M

**OR**

- 2 a Explain front and rear wheel drive layout in detail with relevant sketch. 6M  
b List & Explain the different types of Combustion Chamber in C.I Engine. 6M

**UNIT-II**

- 3 a Explain the working of supercharger with a neat sketch. 8M  
b What are the advantages and disadvantages of supercharger? 4M

**OR**

- 4 a Explain the various needs of alternative fuels. 7M  
b What are the various types of alternate fuels available and mention their importance. 5M

**UNIT-III**

- 5 a What is meant by Ignition? List out the types of Ignition System. 6M  
b What is the need of Ignition System used in Automobile? 6M

**OR**

- 6 a What is mean by Engine cooling system? List out the different types of Cooling system. 5M  
b State the necessity of Engine cooling system. 7M

**UNIT-IV**

- 7 a What are the different functions of Clutch? 6M  
b Discuss in detail about the fluid coupling. 6M

**OR**

- 8 a What are the different materials used for manufacturing of Clutch. 6M  
b List out the required properties needed for material used for manufacturing of clutch. 6M

**UNIT-V**

- 9 a Explain about Steering Gears. 6M  
b Discuss clearly about Steering Mechanism. 6M

**OR**

- 10 a Explain about Torque Bar. 6M  
b Discuss about shock absorber in detail. 6M

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