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**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)**B.Tech IV Year I Semester Regular Examinations November/December-2022****AUTOMOBILE ENGINEERING**

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 60

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

**UNIT-I**

- 1 a Define the following terms. L1 6M  
i) Engine ii) Heat Engine
- b Define the following terms. L1 6M  
i) Rear wheel drive ii) Front wheel drive

OR

- 2 a Define combustion? Explain the different types of combustion process. L1 6M
- b Explain the direct injection type combustion chamber in CI Engine. L1 6M

**UNIT-II**

- 3 a Explain the following terms L1 6M  
i) Emission norms ii) Types of pollutants
- b Explain the working of turbocharger with a neat sketch. L1 6M

OR

- 4 a What are the advantages and disadvantages of turbocharger. L1 6M
- b Explain the various needs of alternative fuels. L2 6M

**UNIT-III**

- 5 a Explain the following terms L1 6M  
i) Ignition system ii) Types of ignition system
- b Write the uses of various components used in Horn System. L1 6M

OR

- 6 a State the necessity of bendix drive. L1 6M
- b What is the function of engine lubrication. L1 6M

**UNIT-IV**

- 7 a What is the function of fluid coupling and state its merits. L1 6M
- b What are the different functions of clutch. L1 6M

OR

- 8 What are the different types gear boxes used in an automobile? Explain any one of it with neat diagram. L1 12M

**UNIT-V**

- 9 a Elucidate about Torque Bar. L1 6M
- b Discuss about shock absorber in detail. L1 6M

OR

- 10 Describe about Ackerman steering gear Mechanism with the help of a neat layout. L1 12M

\*\*\* END \*\*\*

INTERNAL CONTROL SYSTEMS & TECHNOLOGY - PL 111

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Max Marks 100

INTERNAL CONTROL SYSTEMS & TECHNOLOGY - PL 111

UNIT I

1. A control system is a system in which the output is controlled by the input.

2. The basic elements of a control system are the reference input, the controller, the plant, and the feedback path.

UNIT II

3. A transfer function is a mathematical representation of the input-output relationship of a system.

4. The transfer function of a system is the ratio of the Laplace transform of the output to the Laplace transform of the input.

UNIT III

5. A block diagram is a pictorial representation of a control system.

6. The block diagram of a control system shows the interconnection of the various components of the system.

UNIT IV

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UNIT V

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UNIT VI

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UNIT VII

13. A block diagram is a pictorial representation of a control system.

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UNIT VIII

15. A block diagram is a pictorial representation of a control system.

16. The block diagram of a control system shows the interconnection of the various components of the system.

UNIT IX

17. A block diagram is a pictorial representation of a control system.

18. The block diagram of a control system shows the interconnection of the various components of the system.

UNIT X

19. A block diagram is a pictorial representation of a control system.

20. The block diagram of a control system shows the interconnection of the various components of the system.