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Fifth Semester B.E. Degree Examination, June/July 2017
Auxiliary System for Automotive Engines

Time: 3 hrs.

Max. Marks:100

Note: Answer FIVE full questions, selecting atleast TWO questions from each part.

PART – A

- 1 a. Explain the basic principle of carburetion with a neat sketch of simple carburetor. (10 Marks)
b. Discuss the following :
i) function of choke ii) effect of altitude on carburetor. (10 Marks)
- 2 a. Discuss the various considerations in petrol injection system. (06 Marks)
b. Compare direct Vs indirect injection systems. (06 Marks)
c. State the advantages and disadvantages of petrol injection system. (08 Marks)
- 3 a. List the types of fuel pumps and explain any one type. (08 Marks)
b. Discuss the various parameters influencing fuel spray atomization. (06 Marks)
c. Explain the functions governors and their importance in fuel supply system. (06 Marks)
- 4 a. Explain the working of CRDI with the help of neat sketch. (10 Marks)
b. Write short notes on :
i) Filters ii) Nozzles. (10 Marks)

PART – B

- 5 a. List and explain about the intake system components. (10 Marks)
b. Discuss about the following :
i) spark arresters ii) exhaust mufflers. (10 Marks)
- 6 a. Discuss the need of cooling system in automobiles. (03 Marks)
b. Compare air cooling Vs water cooling. (04 Marks)
c. Explain the working principle of thermostat with figure. (08 Marks)
d. List out the desired properties of a coolant with example. (05 Marks)
- 7 a. List out the functions of lubricants and explain the properties required. (08 Marks)
b. Write a short notes on following :
i) Lubrication of piston rings
ii) Additives and lubricity improvers
iii) Crank case ventilation. (12 Marks)
- 8 a. What is supercharging? State the limitations. (06 Marks)
b. Explain the modifications of an engine for adopting supercharging. (06 Marks)
c. State the advantages and disadvantages of turbocharging. (08 Marks)

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2. Any revealing of identification, appeal to evaluator and for equations written e.g. 4. 8 30. will be treated as copy records