

# ONE TIME EXIT SCHEME

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## Fifth Semester B.E. Degree Examination, April 2018 Auxiliary Systems of Automotive Engines

Time: 3 hrs.

Max. Marks: 100

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

### PART – A

- 1 a. Explain the working of a simple carburettor with a neat sketch. (10 Marks)  
b. What do you mean by compensating devices in carburettors? Explain any two in detail. (10 Marks)
- 2 a. What are the requirements, advantages and disadvantages of a gasoline fuel injection system? (10 Marks)  
b. With a neat sketch explain the Gasoline Direct Injection (GDI) system. (10 Marks)
- 3 a. Explain with a neat sketch, the working of pneumatic governor. (10 Marks)  
b. Discuss the requirements of a good diesel injection system. What are factors influencing fuel spray atomization. (10 Marks)
- 4 a. Explain the construction and working of CRDI system. Mention this merits and demerits. (10 Marks)  
b. Discuss the various types of fuel injection nozzles. (10 Marks)

### PART – B

- 5 a. Explain the different types of mufflers with neat sketches. (12 Marks)  
b. Explain an oil-bath aircleaner, with a neat sketch. (08 Marks)
- 6 a. Explain the following types of water cooling system.  
i) Thermosyphon system ii) Forced circulation system. (12 Marks)  
b. What are the advantages and disadvantages of air cooling and water cooling systems. (08 Marks)
- 7 a. What is the function of an additives? Discuss the types of additives used in lubrication of IC engines. (08 Marks)  
b. Explain with a neat sketch wet sump lubricating system. Compare wet sump and dry sump lubrication. (12 Marks)
- 8 a. Discuss the effect of supercharging on power output, mechanical efficiency and specific fuel consumption. (12 Marks)  
b. With a neat thermodynamic cycle, explain the concept of supercharging an engine. (08 Marks)

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