Reg.No.										

MANIPAL INSTITUTE OF TECHNOLOGY
Manipal University, Manipal – 576 104

DEPARTMENT OF AERONAUTICAL & AUTOMOBILE ENGINEERING
VI SEM. B.Tech (AUTOMOBILE ENGG.)
DEGREE END SEMESTER EXAMINATIONS JULY. 2015

SUBJECT: AUTOMOTIVE POLLUTION CONTROL (AAE-384)
REVISED CREDIT SYSTEM

Time: 3 Hours. MAX.MARKS: 50

Instructions to Candidates:

- Answer **ANY FIVE FULL** questions.

1A) Briefly compare the Liquefied Petroleum Gas and Compressed Natural Gas as alternative fuels for the automotive applications citing their respective merits and demerits. **(06)**

1B) What is the role of EGR in emission control? With a neat sketch explain the working of EGR system **(04)**

2A) List the silent features and merits of alcohol over gasoline as an alternative fuel **(04)**

2B) With a neat sketch explain the working of plugin type hybrid vehicle with its merits and demerits **(06)**

3A) List the stages of combustion in C.I engine. Explain the engine variables which affect the knocking in C.I engine. **(07)**

3B) Explain the causes for tyre wear in automotive and how significantly it affects the air pollution **(03)**

4A) With a neat sketch explain the common rail diesel injection system. List the merits and demerits **(06)**

4B) Briefly explain the basic requirements of fuels used in C.I engines. **(04)**

5A) With a neat sketch explain the working duel fuel engines **(04)**

5B) With a neat sketch explain the working principle of infrared analyzer technique. **(04)**

5C) What is meant by fumigation technique **(02)**

6A) Differentiate between stratified charge engine and lean burn engines. **(03)**

6A) With a neat sketch explain the evaporative loss control device **(03)**

6C) With a neat sketch explain the thermal conductivity detectors. Explain the merits **(04)**