

Internal Combustion Engines , ME422 Yeditepe Üniversitesi

Homework #2 to be submitted by 1st December, 2017

- 1) Calculate air to fuel ratio by mass, for a four-cylinder SI engines running on
 - i) **gasoline** and
 - ii) a mixture of 20% **methanol** and 80% **gasoline**both at stoichiometric mixtures.

Assume gasoline is represented with C_8H_{15} .

- 2) Estimate any loss of power as a percentage when **gasoline-methanol mixture** is used as a fuel for the carbureted engine originally designed to operate on stoichiometric gasoline.
- 3) State any assumptions that you made indicating the values used and **discuss** your results