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Roll No.....

ME-104

M.Tech. (Thermal) - I Sem (Reg./Ex)

Examination, March. 2021

IC Engines & Alternate fuels

Time: Three Hours

Maximum Marks: 70

Note: Attempt any five questions (each question carries equal marks)

(b) Describe the performance characteristics of variable compression ratio engine with conventional IC engine.

Q.5 (a) Differentiate normal & abnormal combustion

(b) How do you measure air flow rate of an engine.

Q.6 (a) Discuss production of ethanol from

(i) Grain

(ii) Sugarcane

Q.7 (a) Compare properties of alcohol & gasoline

(b) Is biogas suitable for diesel engine?

Q.8 Write short note on any two

(i) MPFI system

(ii) Rotary engine working

(iii) Hydrogen as alternate fuel

(iv) Air pollution by engine

Q.1 (a) Explain various combustion stages in pressure angle diagram with neat sketch.

(b) How higher engine speeds affect MEP?

Q.2 (a) Describe the phenomenon of detonation in SI engine.

(b) What factors reduce the occurrence of detonation in petrol engine?

Q.3 (a) Discuss different methods of supercharging used in practice

(b) Discuss various elements of MPFI system & also write its merits & demerits

Q.4 (a) Describe the working of dual fuel engine with neat sketch & discuss its performance characteristics.

