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## **AU/ME-503(C)-CBGS**

**B.Tech., V Semester**

Examination, June 2020

### **Choice Based Grading System(CBGS)**

#### **Alternate Automotive Fuels and Emissions**

*Time : Three Hours*

*Maximum Marks : 70*

**Note:** i) Attempt any five questions.

ii) All questions carry equal marks.

iii) In case of any doubt or dispute the English version question should be treated as final.

1. a) Explain the rating of SI and CI engine fuels. What are the merits and demerits of various alternate fuels?

b) What do you understand methanol and gasoline blend? Explain its performance in automobile engine.

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2. a) What are alternate energy sources? Explain the fuel cell and solar cars.  
b) Explain the performance and safety aspect to all gaseous fuels.
3. a) What is Bio diesel? Explain the characteristics of bio diesel.  
b) Explain the evaporative emission crank case emission.
4. a) What are Alcohols? Can they use as engine fuel? If yes, explain the properties of alcohol as engine fuel.  
Alcohols  
alcohol  
&  
b) Explain with neat sketch the process of formation of biogas and factor affecting biogas formation.
5. a) Explain the automobile emission characteristics and formation of automobile emissions.  
b) Describe the various characteristics of SI and CI engines alternative fuels.

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6. a) What is Smog? Compare the diesel and petrol emissions.
- b) What do you understand by Automobile emissions? What are the various types of automobile emissions?

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7. a) What are the demerits of automobile emission to environment? What are the types of catalytic conversion?
- b) Explain the formation of smoke in automobiles and factor affecting the smoke formation.
8. a) How the biogas is used in SI engines and CI engines? Explain the properties of Natural gas.
- b) Explain chemiluminescent analyzer and gas chromatograph.  
Chemiluminescent

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