



Reg. No. :

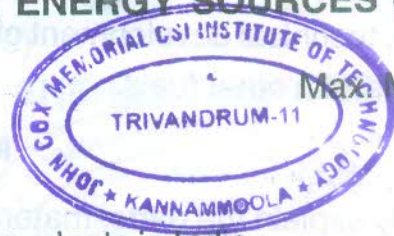
Name :

Seventh Semester B.Tech. Degree Examination, May 2014

(2008 Scheme)

(Elective – III) 08.706.21 : ALTERNATE ENERGY SOURCES (MPU)

Time : 3 Hours



Max. Marks : 100

PART – A

1. Explain the socio-economic relevance of Biogas plants in India.
2. Compare the properties of LPG and gasoline w.r.t. their use in SI engines.
3. Note down the difference between hybrid vehicle and an electric vehicle.
4. Explain bio-diesel blends.
5. List the methods to produce clean energy from biomass.
6. What are the various types of vegetable oils available ? State them.
7. What are the uses of alcohols in Compression Ignition engine ?
8. Explain the need for energy conservation in transportation sector.
9. List down the properties of methanol.
10. State some of the solar cells used for the production of solar power.

(10x4=40 Marks)

PART – B

Answer **one** question from **each** Module.

Module – I

11. State the various methods of Ethanol Production.

20

12. Write brief notes on the following :

- i) Anti-knock quality of blend.
- ii) Comparison of properties of Methanol and Gasoline.

(10+10)

**Module – II**

13. Explain the methods of Biogas production, and detail about a biogas plant. 20
14. State the technical development of LPG as gaseous fuel and compare the emissions with other fuels. 20

Module – III

15. a) Briefly explain the parts, materials used and working of a flat plate solar thermal conductor. 10
- b) What is a hybrid vehicle ? Explain various lay outs used for hybrids and compare. 10
16. With a neat sketch state and explain the various major components used in the electric vehicle in the parallel configuration. 20
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