

- 9) Octane number of CNG is nearly_____. (01)
 (a) 20 (b) 130 (c) 90 (d) 50
- 10) _____ is probably the most attractive for the application in vehicles. (01)
 (a) PME (b)PAFCs (c) SOFCs (d)MCFCs
- 11) Ceramic engine component are made from_____ ? (01)
 (a) SZ (b) LAS (c) HPSC (d) EPF
- 12) Fuel blending is method adopted to use _____ fuel in SI engine. (01)
 (a) EPF (b) Alcohol
 (c)CNG (d) None of these
- 13) In the stratified charged engine _____ is use as fuel. (01)
 (a) Petrol (b) Diesel (c) Bio-diesel (d) none of these.
- 14) Which of the following is material used in production of Bio-diesel? (01)
 (a) Hydrogen (b) Alcohol (c) CNG (d) LPG

Attempt any four questions from Q-2 to Q-8

- Q-2 Attempt all questions (14)**
 (a) What are the barriers in implementing alternative fuels? (07)
 (b) Explain various properties of methanol and ethanol as engine fuels. (07)
- Q-3 Attempt all questions (14)**
 (a) Why blend of either ethanol or methanol are preferred over pure alcohol. (07)
 (b) Explain Wankel engine with neat sketch. (07)
- Q-4 Attempt all questions (14)**
 (a) Write short note on Esterification. (07)
 (b) Enlist various vegetable oils used as an engine fuel and write its required characteristics? (07)
- Q-5 Attempt all questions (14)**
 (a) Write short note on Fuel Cell. (07)
 (b) Explain layout of hydrogen Car. (07)
- Q-6 Attempt all questions (14)**
 (a) Explain Layout of solar powered vehicle. (07)
 (b) With neat sketch discuss construction and working of hybrid vehicle. (07)
- Q-7 Attempt all questions (14)**
 (a) Write short note on Factors effecting on biogas formation. (07)
 (b) Discuss use of CNG as engine fuel. (07)



Q-8

Attempt all questions

(14)

(a)

Explain free piston engine with neat sketch.

(07)

(b)

What is EPF? Write advantages and limitation of the EPF.

(07)

