

QUESTION BANK

Semester :- 4th

Subject :- TE-II

Branch :- Mechanical

Short Questions

1. (a) what are the uses of compressed air ?
- (b) Define heat engine.
- (c) what are TDC and BDC in IC engine ?
- (d) Define Thermal Efficiency.
- (e) what is mechanical efficiency ?
- (f) Define fuel specific consumption.
- (g) Define dryness fraction.
- (h) Define mean effective pressure.
- (i) write use of compressed air.

Long Questions

- ① A four stroke four-cylinder petrol engine has 62 mm diameter of bore and 92 mm stroke length. On test, it developed a torque of 60 Nm, when running at 2500 rpm. If clearance volume of each cylinder is 55 cm³, the ~~real~~ relative efficiency is 0.5 and calorific value of petrol is 42 MJ/kg. Find the fuel consumption in kg/hr and the brake mean effective pressure.
- ② Describe construction and working of a Reciprocating air compressor ?

③ A gas engine has piston diameter of 200mm and stroke length of 500mm, mean effective pressure is 5 bar and RPM is 200. determine mechanical efficiency of the engine, if its brake power is 5kw. Also determine piston speed of the engine.

④ Derive the efficiency of Carnot vapour cycle.