Chapter No. 11

1. The no. of spark plugs needed in the diesel engine are

   a. 0 b. 1 c. 2 d. 3

2. The difference between Cp and Cv is equal to

   a. Molar gas constant b. General gas constant c. Planck's constant d. Boltzmann constant

3. The no. of spark plugs needed in the petrol engine are

   a. 0 b. 1 c. 2 d. 3

4. Heat is form of

   a. power b. energy c. momentum d. torque

5. The efficiency of Carnot engine depends upon:

   (A) Sink temperature (B) Source temperature

   (C) Both source and sink temperature (D) The working substance

6. Isothermal process is carried out at constant:

   (A) Volume (B) Pressure (C) Energy (D) Temperature

7. Boltzmann's constant 'k' is equal to:

   (A) R/N_A (B) $1/RN_A$ (C) N_A/R (D) RN_A

8. The unit of entropy is:

   (A) JK (B) K/J (C) J/K^2 (D) J/K

9. Working cycle of a typical petrol engine consists of:

   (A) Two strokes (B) Four strokes (C) Six strokes (D) Eight strokes

10. The value of Boltzmann's constant is:

    (A) 1.38×10^{-23} J/K (B) 13.8×10^{-23} J/K

    (C) 138 J/K (D) 138×10^{-23} J/K

11. Efficiency of Diesel Engine is:

    (A) 35% to 40% (B) 25% to 30% (C) 40% to 50% (D) 50% to 60%

12. The value of 'r' for diatomic gas is:

    (A) 1.67 (B) 1.40 (C) 1.29 (D) Infinity

13. The value of triple point of water is:

    (A) 373.16 K (B) 273.16 K (C) 212 K (D) 100 K

14. The efficiency of a petrol engine is about:

    (A) 25% to 30% (B) 30% to 35% (C) 35% to 40% (D) 40% to 45%

13. Which is the process in which temperature remains constant

    (A)isothermal (B) adiabatic (C) isochoric (D) isobaric

15. A system does 600 J of work and at the same time its internal energy is increased by 320 J. How much heat has been supplied?

    (A) 280 J (B) 920 J (C) 600 J (D) 200 J

16. The kinetic molecular theory of gas suggests that average K.E per molecule is

    (A) ½ KT (B) KT (C)3/2 KT (D) 2KT