66. The breakdown voltage of a junction diode is below 6V due to

   (A) avalanche multiplication.

   (B) tunneling phenomenon.

   (C) thermal runaway.

   (D) none of the above.

67. 120 litres of nitrogen gas expands adiabatically strating at a pressure of 1 atm and the final volume is 200 litres. If Cp/Cv for nitrogen gas is 1.4, the final pressure will be

   (A) 0.32 atm .

   (B) 0.49 atm .

   (C) 0.25 atm .

   (D) 0.64 atm .

68. 1 Kg of water at 100°C is transformed at a constant pressure into steam at the same temperature. The change in entropy in this process is about

   (A) 2 kJ/K.

   (B) 4 kJ/K .

   (C) 6 kJ/K .

   (D) 8 kJ/K.

69. Iodine−131 has a half life of 8 days. Its radioactive decay constant is

   (A) $1 \times 10^{-6} s^{-1}$.

   (B) $2 \times 10^{-6} s^{-1}$.

   (C) $4 \times 10^{-6} s^{-1}$.

   (D) $8 \times 10^{-6} s^{-1}$.

70. Which part of the output characteristics of a npn transistor is used while operating it as an amplifier.

   (A) Saturation region .

   (B) Active region.

   (C) Cut-off region .

   (D) Breakdown region.