DEPARTMENT OF PHYSICS AND NANOTECHNOLOGY

SRM Institute of Science and Technology

18PYB103J – Semiconductor Physics

Assignment: 2 (Module - 2 and 3)

Register No: _____

Name: _____

Year, Branch and Section: _____

Date: _____

Instructions:

Write (Do not type) the answer for the following question in A4 sheet and submit the scanned copy of same in the PDF format in Google Classroom (GCR).

Questions: **(10 Mark)**

1. Derive an expression for the Fermi energy of intrinsic semiconductor and also explain the variation of Fermi energy with temperature for n type and p type semiconductor.

(Or)

2. Derive an expression for

    (i)   Optical joint density of states and

    (ii)   Density of states of photon.