DEPARTMENT OF PHYSICS AND NANOTECHNOLOGY

SRM Institute of Science and Technology

18PYB103J – Semiconductor Physics

# Assignment: 1 (Module-1)

Register No: \_\_\_\_\_\_RA2011026010022\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name: \_\_\_\_Debarghya Barik\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Year, Branch and Section: \_\_2020 ; CSE with specialization in AIML ; J1 \_\_\_

Date: \_\_\_\_\_\_\_\_01.11.2020\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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 to find number of energy states of electron in the given range per unit volume of the system (Density of states).

(Or)

1. Using Kronig Penney model find the energy of an electron moving in constant and periodic potential.