

Gurudas College (CU)
Internal Examination 2020
B.Sc Semester –IV
Physics Hons (PHSA) Practical
Paper – CC9

Full Marks: 15

Time: 1 Hour

Answer *all the* questions

1. (a) What is tunnelling?
(b) Determine what will be the value of the reflection coefficient R in case of a step potential when the energy E of the incident particle will be less than the height V_0 of the step.
(c) State qualitatively how the transmission coefficient T will change with the energy E of the incident particle in case of a potential barrier .

1+5+1

2. (a) Explain what are direct band-gap and indirect band-gap materials?
(b) Discuss the mechanism of light emission in a LED. Explain why a Si diode cannot be used as a LED.

2+(3+3)