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B.Sc. I Semester (NEP) Degree Examination, March/April - 2022

ELECTRONICS

Basic Electronics

Time : 3 Hours

Maximum Marks : 60

Instruction : Answer **all** Sections.

SECTION - A

1. Answer the following sub questions. **10x1=10**
- (a) What is Active Components ?
 - (b) Define the Resistor.
 - (c) Define frequency.
 - (d) What is rms value ?
 - (e) Define mesh in network analysis.
 - (f) What do you mean by Unilateral Circuits ?
 - (g) What is Intrinsic Semiconductor ?
 - (h) What is N-type Semiconductor ?
 - (i) What is LED ?
 - (j) What is NPN transistor ?

SECTION - B

Answer **any four** questions.

4x5=20

- 2. What is Capacitor ? Explain the Electrolytic capacitor.
- 3. Derive the resonance frequency of series RLC circuit.
- 4. State and prove the Maximum power transfer theorem.
- 5. Explain the working of N-type Semiconductor.
- 6. Construction and Working of Light emitting diode.
- 7. Explain the working of NPN transistor.



P.T.O.

SECTION - C

Answer **any three** questions.

3x10=30

8. Explain the different types of Resistors.
9. Derive the expression for RMS value of a Sinusoidal Wave.
10. State and Prove Reciprocity theorem.
11. Explain the classification of Solids by energy band theory.
12. Explain the CB, CE and CC Configurations of Transistor.

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