Surendranath Evening College

Class : Sem4 Paper : SEC Sub. : Mathematics(General)

Full Marks – 20 Time : 12PM – 12.30PM

Send all the answer scripts to the the departmental e-mail: **mathsnec@gmail.com**

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Section – A

Answer any four. 4×5

1. Construct truth table for $(A \Rightarrow B) \wedge A$.

2. Write the following sentences as a statement form

   $i)$ if x is positive, x^2 is positive.

   $ii)$ a sufficient condition for x to be odd is that x is prime.

3. Show that $A \wedge (B \vee C)$ is logically equivalent to $(A \wedge B) \vee (A \wedge C)$.

4. Determine whether $(A \Rightarrow (B \vee C)) \vee (A \Rightarrow B)$ is a tautology.

5. Write short note on conjunction and disjunction of two formulas A and B with truth table.