

Course: SEC-B(Mathematical Logic)

Choose the correct alternative:

5×2=10

6. Simplification of the function  $f(x, y, z) = x(yz' + yz)$  is
- $xy$
  - $x'y'$
  - $x'y$
  - $xy'$
7. A Boolean function  $f$  is defined by  $f(x, y, z) = xy + yz + zx$ . The conjunction normal form of  $f(x, y, z)$  is-
- $f(x, y, z) = (x + y + z)(x + y + z')(x + y' + z)(x' + y + z)$
  - $f(x, y, z) = (x' + y' + z')(x + y + z')(x + y' + z)(x' + y + z)$
  - $f(x, y, z) = (x + y + z)(x + y' + z')(x' + y' + z)(x' + y + z')$
  - $f(x, y, z) = (x' + y' + z')(x + y' + z')(x' + y' + z)(x' + y + z')$
8.  $A \vee \sim A$  is
- T
  - F
  - Neither T nor F
  - Both T and F
9. A valuation is a mapping from the set of propositional variable to the two element set
- {T,T}
  - {T,F}
  - {F,F}
  - None of these
10. The disjunction of  $p$  and  $q$  is denoted by
- $p \vee q$
  - $p \wedge q$
  - $p \rightarrow q$
  - None of these