- ▶ Commutative Law:
- ▶ Implication Laws:
- ▶ Exportation Law:
- ▶ **Reductio ad absurdum**

Question No: 6 (Marks: 1) - Please choose one
A circuit with one input and one output signal is called.

- ▶ **NOT-gate (or inverter) (Page 31)**
- ▶ OR- gate
- ▶ AND- gate
- ▶ None of these

Question No: 7 (Marks: 1) - Please choose one
If f(x)=2x+1, $g(x)=x^2-1$ then fg(x)=

- ▶ x^2-1
- ▶ $2x^2-1$
- ▶ $2x^3-1$

$$fg(x)=f\left(x^2-1\right)$$
$$f\left(x^2-1\right)=2\left(x^2-1\right)+1$$
$$=2x^2-2+1$$
$$=2x^2-2$$

Question No: 8 (Marks: 1) - Please choose one
Let g be the functions defined by
g(x)= 3x+2 then gog(x) =

- ▶ $9x^2+4$
- ▶ 6x+4
- ▶ **9x+8**

$$gg(x)=g(3x+2)$$
$$g(3x+2)=3(3x+2)+2$$
$$=9x+6+2$$
$$=9x+8$$

Question No: 9 (Marks: 1) - Please choose one
How many integers from 1 through 1000 are neither multiple of 3 nor multiple of 5?

- ▶ 333
- ▶ 467