

Nalanda College – Colombo 10

Unit Evaluation

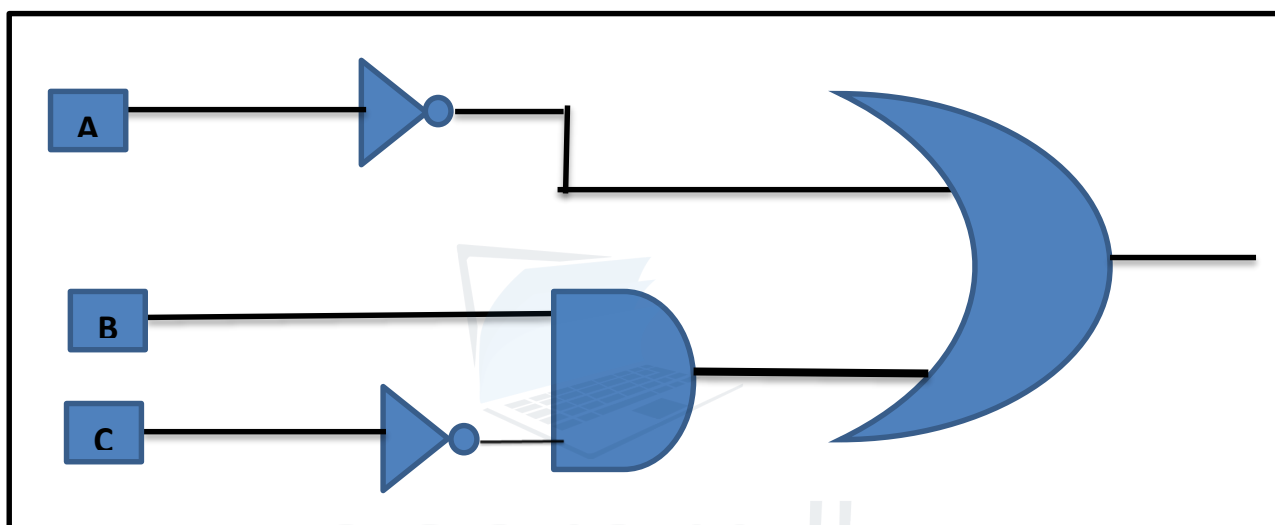
Grade 10

Information and Communication Technology

Unit 04

- Underline the most suitable answer.

a) Which of the following will be the output produced by the circuit given below?



I. $\bar{A} + (B \cdot \bar{C})$

II. $\bar{A} \cdot (B + \bar{C})$

III. $(\bar{A} + B + \bar{C})$

IV. $(\bar{A} \cdot B \cdot \bar{C})$

- 2 and 3 question are based on the given truth table.

A	B	C (ප්‍රතිදානය)
0	0	1
0	1	0
1	0	0
1	1	0

ble

02) The logic circuit which is suitable to the above truth table is,

I. OR

II. AND

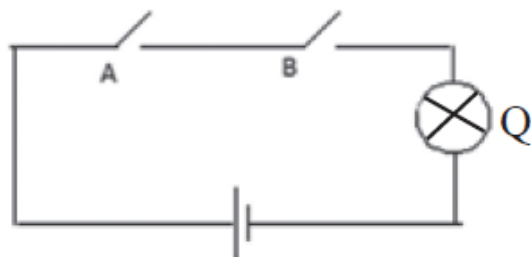
III. NOR

IV. NAND

03) The Boolean expression for the C output is,

- I. $A + B$ II. $A \cdot B$ III. $\overline{A + B}$ IV. $\overline{A \cdot B}$

04) What is the suitable logic gate for the below electric circuit.



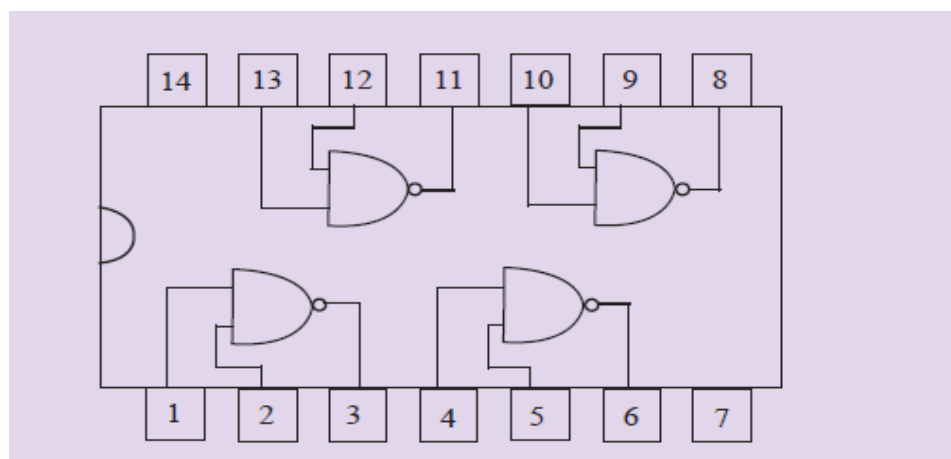
- I. OR II. AND III. NOR IV. NAND

05) A electronic car has controlled remotely by two push button switches. When both buttons are not pressed at all or either one of them is pressed, the care is working .When both buttons are pressed, it is not working. The logic gate that corresponding to the operation of the car is,

- I. OR II. AND III. NOR IV. NAND

• **Write short answer.**

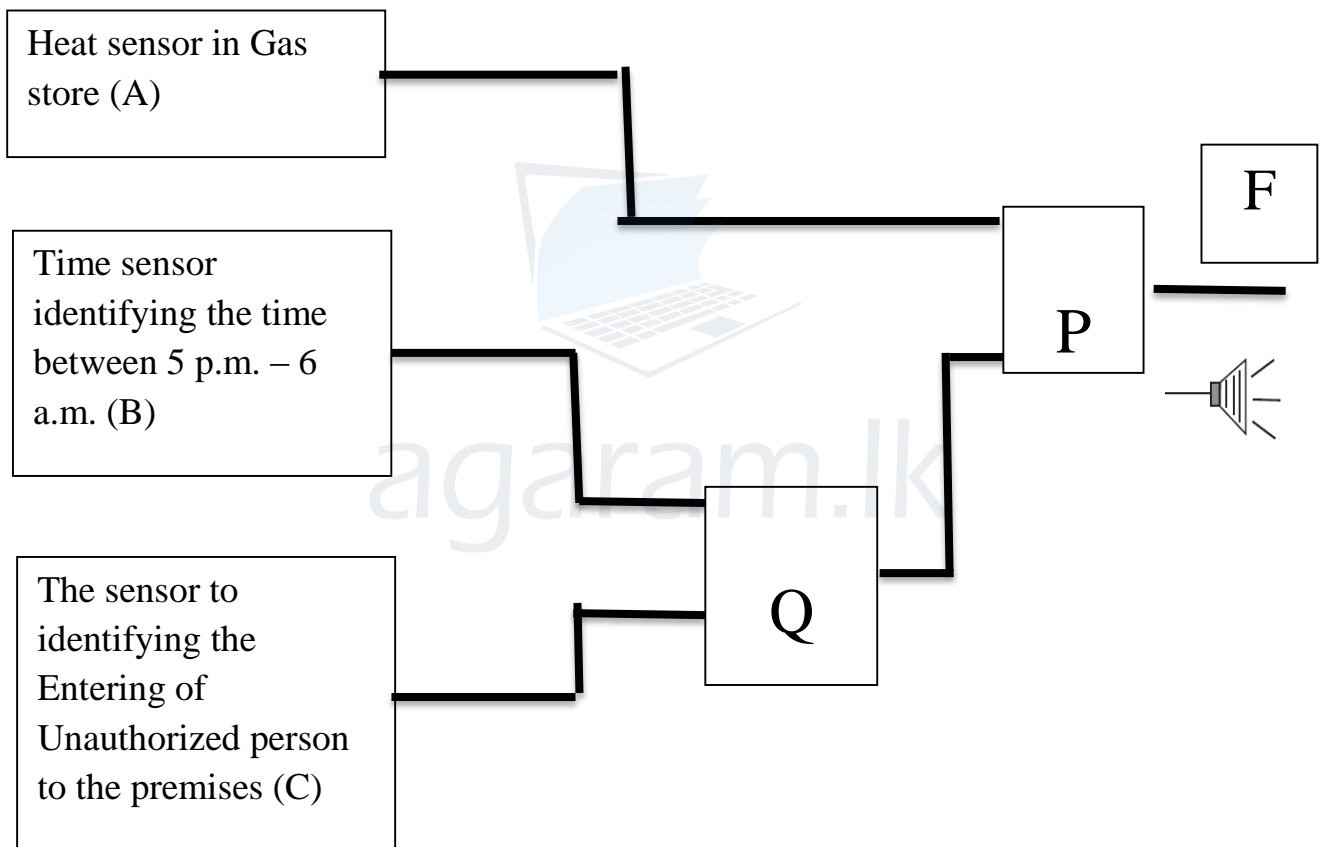
01) In the Intergrade Circuit given below, if pine 4 = 1 and 5 = 0, what is the value of 6?



02) Draw circuit for the Boolean expressions given below and construct the related truth tables.

- $A + (B \cdot C)$
- $(A + \bar{B}) \cdot (A \cdot \bar{C})$
- $\overline{(A + B)} \cdot C$

03) Following is a logic circuit designed for a Gas store. To alarm signal giving there should be either heat generated in Gas store OR arrival of unauthorized person in time between 5 p.m. to 6 a.m.



a

- Draw suitable logic gates to P and Q.
- Write the corresponding expression for “F” using A, B and C.