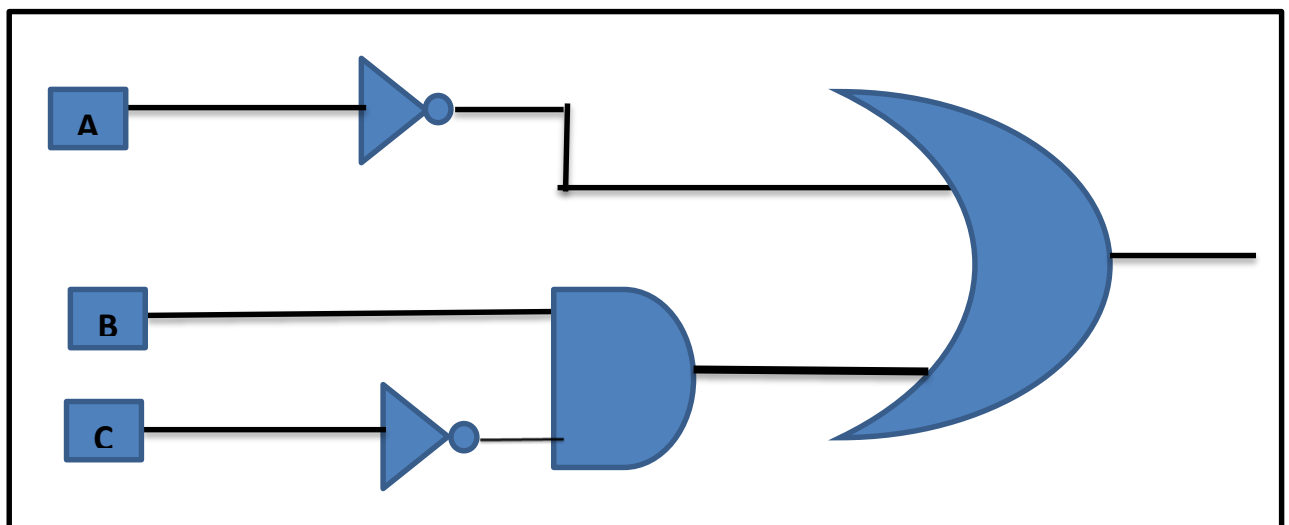- **Underline the most suitable answer.**

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

I. $\overline{A} + (B.\overline{C})$ II. $\overline{A} . (B + \overline{C})$

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

- 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

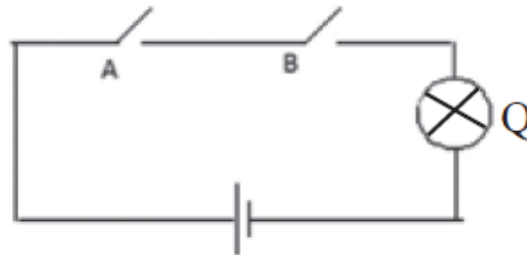ICT Grade 10

03) The Boolean expression for the C output is,

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

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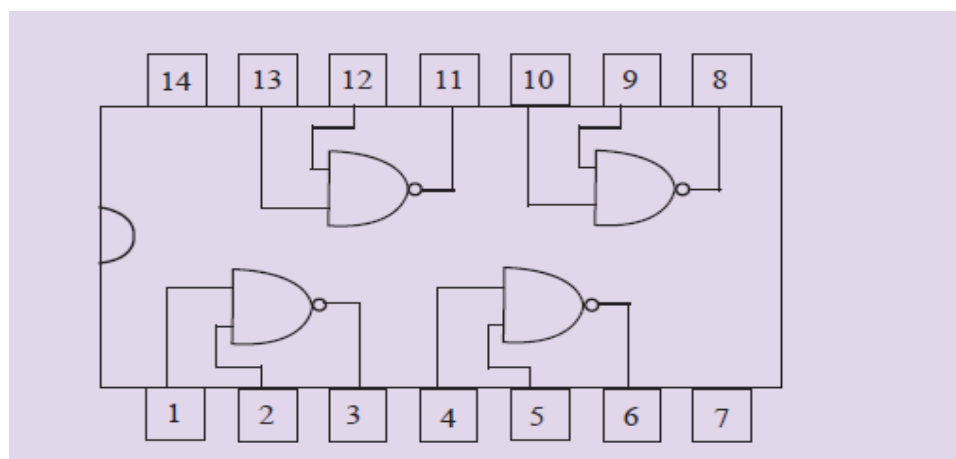
    I. OR   II.AND   III.NOR   IV.NAND

- **Write short answer.**

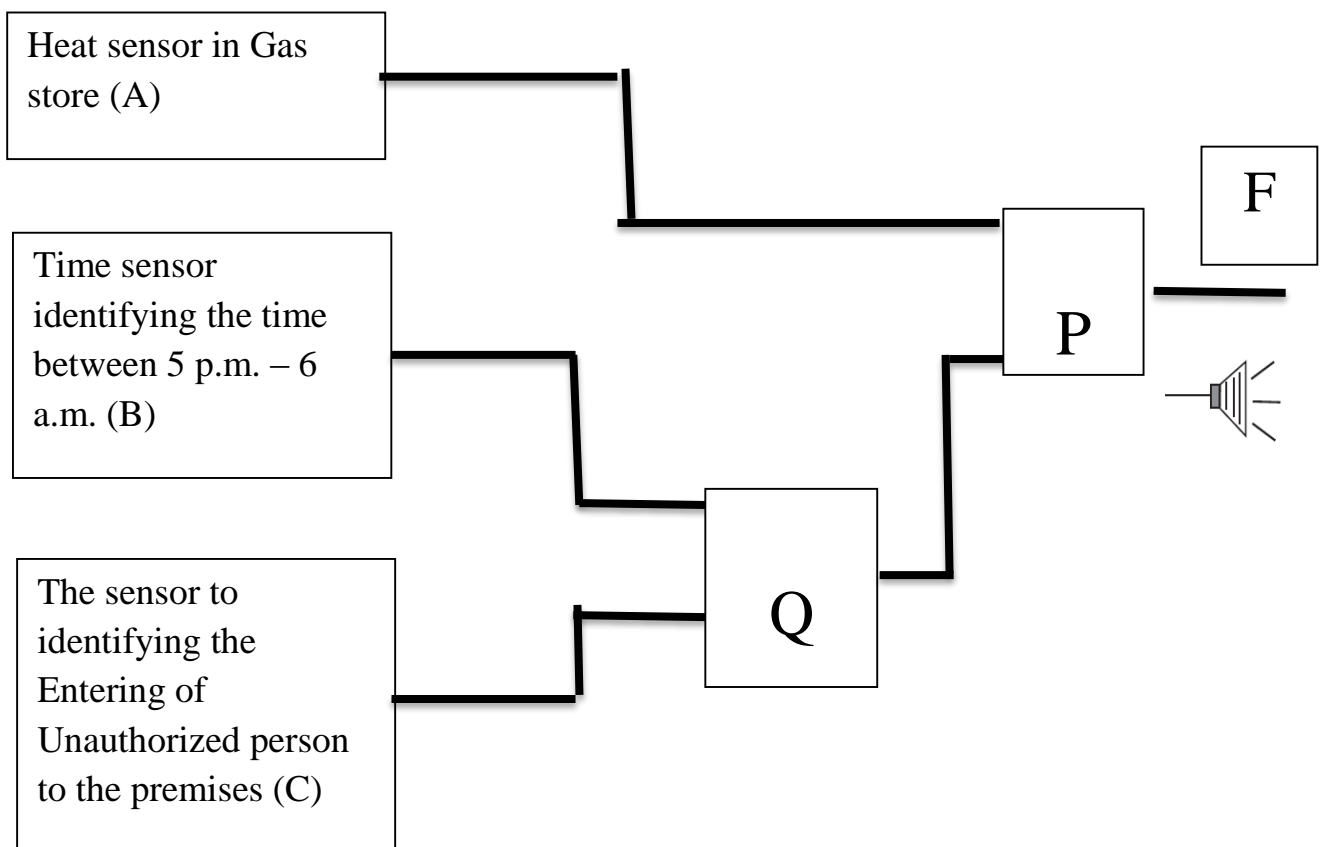01) In the Intergrade Circuit given below, if pine 4 = 1 and 5 = 0, what is the value of 6?

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

    a) $A + (B.C)$

    b) $(A + \overline{B}).(A.\overline{C})$

    c) $\overline{(A + B)}.C$

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.

Heat sensor in Gas store (A)

Time sensor identifying the time between 5 p.m. – 6 a.m. (B)

The sensor to identifying the Entering of Unauthorized person to the premises (C)

P

Q

F

a

    a) Draw suitable logic gates to P and Q.

    b) Write he corresponding expression for "F" using A, B and C.

3