



## ANSWER KEY – 4

### TOPIC – LOGIC GATES & COMBINATIONAL CIRCUITS

**SUBJECT: COMPUTER APPLICATION**

**F.M.: 15**

**CLASS: XII**

**DATE: 06.05.2020**

➤ Choose the correct option:

(1X15=15)

1) The basic operation of a half adder circuit is to add \_\_\_\_\_ binary digits:

- (a) **2** (b) 3 (c) 4 (d) 5

2) The sum expression for a half adder which adds the digits A & B is:

- (a)  **$\overline{A}B + A\overline{B}$**  (b)  $\overline{A} \oplus B$  (c)  $A \cdot B$  (d)  $A + B$

3) The carryout bit expression for a half adder which adds the digits A & B is:

- (a)  $\overline{A}B + A\overline{B}$  (b)  $\overline{A} \cdot B$  (c)  $A + B$  (d)  **$A \cdot B$**

4) The borrow expression for a half subtractor which subtracts the digits A & B is:

- (a)  $\overline{A}B + A\overline{B}$  (b)  **$\overline{A} \cdot B$**  (c)  $A + B$  (d)  $A \cdot B$

5) The difference expression for a half subtractor which subtracts the digits A & B is:

- (a)  **$\overline{A}B + A\overline{B}$**  (b)  $\overline{A} \cdot B$  (c)  $A + B$  (d)  $A \cdot B$

6) 1+1 will give the carry:

- (a) 0 (b) **1** (c) 2 (d) None of these

7) 1 – 1 will have a borrow:

- (a) **0** (b) 1 (c) 2 (d) None of these

8) 0 – 1 will give the difference:

- (a) 0 (b) **1** (c) 2 (d) None of these

9) 1+1 will give the sum:

- (a) 3 (b) 2 (c) 1 (d) **0**

10) 0 – 1 will have a borrow:

- (a) 10 (b) 11 (c) **1** (d) 0

11) 1 + 0 will have a carry:

- (a) 10 (b) 11 (c) 1 (d) **0**

12)  $0 + 1$  will have a carry:

- (a) 0                      (b) 1                      (c) 10                      (d) None of these

13)  $1 - 0$  will have a borrow:

- (a) 10                      (B) 11                      (c) 1                      (d) 0

14) Half adder is a \_\_\_\_\_ circuit:

- (a) Sequential                      (b) Odd                      (c) Even                      (d) Combinational

15) The basic operation of a half subtractor circuit is to subtract \_\_\_\_\_ binary digits:

- (a) 2                      (b) 3                      (c) 4                      (d) 5

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