



WORKSHEET – 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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