



ANSWER KEY – 7

TOPIC – LOGIC GATES & COMBINATIONAL CIRCUITS

SUBJECT: COMPUTER APPLICATION

F.M.: 15

CLASS: XII

DATE: 09.05.2020

➤ Choose the correct option:

(1X15=15)

1) A multiplexer circuit has:

(a) one input, many outputs

(b) many inputs, one output

(c) one input, one output

(d) many inputs, many outputs

2) In a multiplexer, m control bits can be used to select a maximum of how many input lines?:

(a) 2^m

(b) m

(c) 2m

(d) m^2

3) For a 4X1 MUX, what is the number of inputs?:

(a) 1

(b) 2

(c) 3

(d) 4

4) For a 8X1 MUX, what is the number of outputs?:

(a) 1

(b) 2

(c) 3

(d) 4

5) Multiplexer is a/an _____ circuit:

(a) Sequential

(b) Odd

(c) Even

(d) Combinational

6) The number of OR gate(s) used for circuit diagram of 8X1 MUX will be:

(a) 1

(b) 2

(c) 3

(d) 4

7) The number of AND gate(s) used for circuit diagram of 8X1 MUX will be:

(a) 4

(b) 6

(c) 8

(d) 10

8) An AND-OR SOP circuit can be made using a:

(a) Multiplexer

(b) De - Multiplexer

(c) Encoder

(d) Decoder

9) For 3 control signals, what will be the number of outputs of a Multiplexer?:

(a) 8

(b) 5

(c) 4

(d) 1

10) For 3 control signals, what will be the number of inputs of a Multiplexer?:

(a) 8

(b) 5

(c) 4

(d) 1

11) If there are 16 inputs in a Multiplexer, what will be the number of control signals?:

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

12) In a 4X1 MUX, 10 as control signal combination will give the output:

- (a) I_0 (B) I_1 **(c) I_2** (d) I_3

13) Multiplexer means:

- (a) one to many (b) many to many **(c) many to one** (d) one to one

14) 3 bit control signals can be used to select _____ number of inputs:

- (a) 2 (b) 4 (c) 6 **(d) 8**

15) If the number of inputs is 10, the number of control signals required is:

- (a) 2 **(b) 4** (c) 6 (d) 8

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