



Kunal Jha
 Course: GATE
 Computer Science Engineering(CS)

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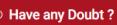
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DIGITAL LOGIC + DISCRETE MATHEMATICS (GATE - 2021) - REPORTS

OVERALL ANALYSIS COMPARISON REPORT **SOLUTION REPORT**

ALL(33) CORRECT(0) INCORRECT(0) SKIPPED(33)

Q. 1

? FAQ 

The set $\{1, 2, 3, 5, 7, 8, 9\}$ under multiplication modulo 10 is not a group. Given below are four possible reasons. Which one of them is false?

A It is not closed

B 2 does not have an inverse

C 3 does not have an inverse

Correct Option

Solution :

(c)

Let us go through each option:

- (a) True, because for example, $(2 \times 5) \bmod 10$ is 0, which is not in the set.
- (b) True, because there is no b such that $(2 \times b) \bmod 10 = 1$ (here 1 is identity element).
- (c) False, because $(3 \times 7) \bmod 10 = 1$, so inverse of 3 exists.
- (d) True, same as (b).

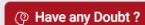
So option (c) is correct.

D 8 does not have an inverse



+

Q. 2



Relation R is defined on ordered pairs of integers as follows:

$(x, y) R(u, v)$ if $x < u$ and $y > v$

Then R is

A Neither a partial order nor an equivalence relation.

Correct Option

Solution :

(a)

A relation R is partial order iff it is reflexive, antisymmetric and transitive.

Reflexive : Does $(x, y) R(x, y)$? No, because $x < x$ is not possible.

So R is not partial Order.

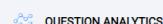
A relation R is Equivalence Relation if it is reflexive, symmetric, and transitive, but we have already seen that R is not reflexive, so R is not equivalence relation as well.

So option (a) is correct.

B A partial order but not a total order.

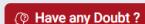
C A total order.

D An equivalence relation.



+

Q. 3



Let R and S be any two equivalence relations on a non-empty set A. Which one of the following statements is TRUE?

A $R \cup S, R \cap S$ are both equivalence relations.

B $R \cup S$ is an equivalence relation.

C $R \cap S$ is an equivalence relation.

Correct Option

Solution :

(c)

$R \cap S$ is an equivalence relation, because in $R \cap S$, we have all pairs of type (a, a) definitely, so $R \cap S$ is reflexive.

Moreover, if there is any pair (a, b) in $R \cap S$, then that must have been present in both R and S and thus (b, a) must have also been present in both R and S, and so in $R \cap S$, so $R \cap S$ is also symmetric. We can argue similarly for transitivity. If there are pairs (a, b) and (b, c) in $R \cap S$, then they both must have been present in R as well as S and so (a, c) would have also been present in both R and S and so (a, c) must also be present in $R \cap S$, hence $R \cap S$ is transitive also.

Now let us see $R \cup S$. It is actually not equivalence. The intuition is we may violate the transitivity property because if some (a, b) comes from R and some (b, c) comes from S, then we will not have (a, c) in $R \cup S$ (assuming we don't have (a, c) in R or S).

So let us construct a counter example for $R \cup S$ to be equivalence statement. Let $A = \{1, 2, 3\}$.

Now let $R = \{(1, 1), (2, 2), (3, 3), (1, 2), (2, 1)\}$ and let $S = \{(1, 1), (2, 2), (3, 3), (2, 3), (3, 2)\}$.

Now $R \cup S = \{(1, 1), (2, 2), (3, 3), (1, 2), (2, 1), (2, 3), (3, 2)\}$.

This violates transitivity as we have $(1, 2)$ and $(2, 3)$, but not $(1, 3)$.

So option (c) is correct.

- D Neither $R \cup S$ nor $R \cap S$ are equivalence relations.

QUESTION ANALYTICS

Q. 4

Have any Doubt ?

Let $f: B \rightarrow C$ and $g: A \rightarrow B$ be two functions let $h = f \circ g$. Given that h is an onto function which one of the following is TRUE?

- A f and g should both be onto functions.

- B f should be onto but g need not to be onto

Correct Option

Solution :

(b)

Here function h is $f \circ g$, so it takes element of A as input and gives element of C as output. Since h is given onto, then every element of C must have some pre-image to element of A . Now function f must be onto, because if it were not onto, it could leave out some elements of C , and if it was the case, then h would have been not onto. On the other hand, g may not be onto, because it can leave out some elements of B , and still we can map all elements of A to some elements of B , and those then can map to all elements of C . So option (b) is correct.

- C g should be onto but f need not be onto.

- D Both f and g need to be onto.

QUESTION ANALYTICS

Q. 5

Solution Video

Have any Doubt ?

In an SR latch made by cross coupling two NAND gates, if both S and R inputs are set to 0, then it will result in

- A $Q = 0, Q' = 1$

- B $Q = 1, Q' = 0$

- C $Q = 1, Q' = 1$

Correct Option

Solution :

(c)

If both $R = 0, S = 0$, then both Q and Q' tend to be '1'. NAND gate says if both inputs are 1, the output is 0.

The logic of the circuit (Q' is a complement of Q) not satisfied, logic state is said to be indeterminate state or racing state.

Each state, $Q = '1'$ and $Q = '0'$ and $Q = '0'$, $Q = '1'$ trying to race through so "RACE CONDITION" occurs and output becomes unstable.

- D $Q = 0, Q' = 0$

QUESTION ANALYTICS

Q. 6

Solution Video

Have any Doubt ?

Let $f(A, B) = A' + B$. Simplified expression for function $f(f(x + y, y), z)$ is

- A $x' + z$

- B $xy' + z$

Correct Option

Solution :

(b)

Simplified expression for given function ' f ' is:

$$\begin{aligned}f &= f(f(x + y, y), z) \\&= f(((x + y)' + y), z) \\&= f((x'y' + y), z) \\&= f(((y + y') (x' + y)), z) \\&= f((1 (x' + y)), z) \\&= f((x' + y), z) \\&= (x' + y)' + z = xy' + z\end{aligned}$$

Thus, option (b) is correct.

- C xyz

D None of these

QUESTION ANALYTICS

+

Q. 7

FAQ Have any Doubt ?

+

The number of different $n \times n$ symmetric matrices with each element being either 0 or 1 is
(Note: Power(2, x) is same as 2^x)

A Power(2, n)

B Power(2, n^2)

C Power(2, $(n^2 + n)/2$)

Correct Option

Solution :

(c)

Since we want symmetric matrix, diagonal elements can be anything. So for each of the n diagonal elements, we have 2 choices.

Now number of remaining elements are $n^2 - n$. We can choose half of them, because other half will automatically be decided due to symmetric matrix. So for half of the elements i.e. for each of

the $\frac{(n^2 - n)}{2}$ elements, we have 2 choices.

So total number of elements over which we have choice = $\frac{n^2 - n}{2} + n = \frac{(n^2 + n)}{2}$

So total number of matrices = Power(2, $(n^2 + n)/2$)

Hence, option (c) is correct.

D Power(2, $(n^2 - n)/2$)

QUESTION ANALYTICS

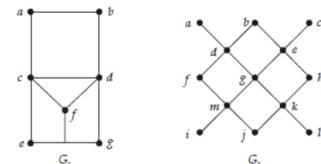
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Q. 8

FAQ Have any Doubt ?

+

Consider the below graph G_1 and G_2 :



Which of the following are correct?

A G_1 contains both Euler and Hamiltonian circuit.

B G_2 contains both Euler and Hamiltonian circuit.

C G_1 contains Hamiltonian circuit and G_2 contains Euler circuit.

D None of these

Correct Option

Solution :

(d)

Both G_1 and G_2 neither have Euler circuit nor Hamiltonian circuit.

QUESTION ANALYTICS

+

Q. 9

FAQ Have any Doubt ?

+

The number of ways 20 identical pens can be distributed among 5 students such that each gets atleast 2 pens is _____.

2002

Correct Option

Solution :

2002

$$x_1 + x_2 + x_3 + x_4 + x_5 = 20$$

Now, $x_1 \geq 2, x_2 \geq 2, x_3 \geq 2, x_4 \geq 2, x_5 \geq 2$

$$x_1 + x_2 + x_3 + x_4 + x_5 = 20 - 2 \times 5 = 10$$

$$\begin{aligned} n-1 + rC_r &= 10 - 1 + 5C_5 \\ &= 14C_5 = 2002 \end{aligned}$$

QUESTION ANALYTICS

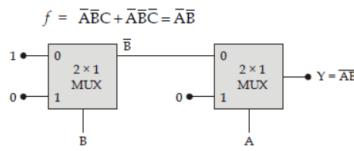
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The minimum number of 2×1 multiplexers required to realize the function $f = \bar{A}\bar{B}C + \bar{A}\bar{B}\bar{C}$ is/are _____.

2

Correct Option

Solution :



Hence 2(2×1) MUX is required.

QUESTION ANALYTICS

+



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CORRECT(0)

INCORRECT(0)

SKIPPED(33)

Q. 11

Have any Doubt?



How many 4-digit even numbers have all 4 digits distinct?

2296

Correct Option

Solution :

2296

For unit's place, we have 5 choices because of even numbers. If we fix 0 there, then for remaining 3 digits, we have $9 \times 8 \times 7 = 504$ choices. If we don't put 0 there, we have 4 choices for unit's place, we have 8 choices for leftmost digit (we can't put 0 there), then for remaining two digits, we have $8 \times 7 = 56$ choices, so total $504 + 4 \times 8 \times 56 = 2296$.

Q. 12

Solution Video

Have any Doubt?

A circuit outputs a digit in the form of 4 bits. 0 is represented by 0000, 1 by 0001, ..., 9 by 1001. A combinational circuit is to be designed which takes these 4 bits as input and outputs 1 if the digit ≥ 5 and 0 otherwise. If only AND, OR and NOT gates may be used, what is the minimum number of gates required? _____

3

Correct Option

Solution :

3

Output is the form of 4 bit and output is 1 when input is greater than 5, i.e. So output will be 1 in case of
 0101 – 5
 0110 – 6
 0111 – 7
 1000 – 8
 1001 – 9

Using K-map, expression formed will be $A + B (C + D)$

This can be implemented with the help of 3 logic gate of type AND OR and NOT.

Q. 13

Solution Video

Have any Doubt?



The number of boolean function possible with 3-boolean variables such that the function contains exactly 2 or 7 minterms in their canonical sum-of-products form is _____.

36

Correct Option

Solution :

36

Number of entries in the truth table = $2^3 = 8$
 Number of functions containing 2-minterms out of 8 possible minterms = 8C_2
 Similarly number of functions containing 7-minterms = 8C_7
 So total number of functions = ${}^8C_7 + {}^8C_2 = 36$.

Q. 14

FAQ

Have any Doubt?



Which of the following are correct?

 A n unique colors will be required for proper vertex coloring of a line graph having n vertices. B In a vertex coloring of a graph any two vertices having a common edge should not have same color.

Correct Option

 C Chromatic number is the minimum number of colors required for proper edge coloring of graph. D n unique colors are required for proper vertex coloring of a complete graph having n vertices.

Correct Option

YOUR ANSWER - NA

CORRECT ANSWER - b,d

STATUS - SKIPPED

Solution :

(b,d)

• Option (a) is incorrect.

A line graph of a simple graph is obtained by connecting two vertices with an edge. So the number of unique colors required will be 2.

- Option (b) is correct.
- Option (c) is incorrect as chromatic number is the minimum number of colors required for proper vertex coloring of graph.
- Option (d) is correct, n-colors required to color complete graph as each vertex is adjacent to each vertex.

QUESTION ANALYTICS

+

Q. 15

? FAQ

Have any Doubt ?

Bookmark

The binary relation $S = \emptyset$ (empty set) on set $A = \{1, 2, 3\}$ is

A reflexive

B Symmetric

Correct Option

C transitive

Correct Option

D Antisymmetric

Correct Option

YOUR ANSWER - NA

CORRECT ANSWER - b,c,d

STATUS - SKIPPED

Solution :

(b, c, d)

Reflexive: A relation is reflexive if every element of set is paired with itself. Here none of the elements of A is paired with themselves, so S is not reflexive. Symmetric: This property says that if there is a pair (a, b) in S, then there must be a pair (b, a) in S. Since there is no pair here in S, this is trivially true, so S is symmetric.

Transitive: This says that if there are pairs (a, b) and (b, c) in S, then there must be pair (a, c) in S. Again, this condition is trivially true, so S is transitive also.

QUESTION ANALYTICS

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Q. 16

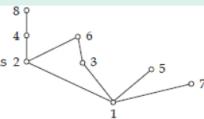
Have any Doubt ?

Bookmark

Which of the following is/are correct with respect to the Hasse diagram for $(A, /)$ (divisibility relation)?

A

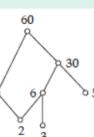
If $A = \{1, 2, 3, 4, 5, 6, 7, 8\}$ then its Hasse diagram is



Correct Option

B

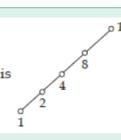
If $A = \{2, 3, 4, 5, 6, 30, 60\}$ then its Hasse diagram is



Correct Option

C

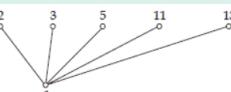
If $A = \{1, 2, 4, 8, 16\}$ then its Hasse diagram is



Correct Option

D

If $A = \{1, 2, 3, 5, 11, 13\}$ then its Hasse diagram is



Correct Option

YOUR ANSWER - NA

CORRECT ANSWER - a,b,c,d

STATUS - SKIPPED

Solution :

(a, b, c, d)

All the statements are correct for obvious reasons.

QUESTION ANALYTICS

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Q. 17

Have any Doubt ?

Bookmark

Your college has sent a contingent to take part in a cultural festival at a neighbouring institution. Several team events are part of the program. Each event takes place through the day with many elimination rounds. Your contingent is multi-talented and each individual has the skills to take part in a subset of the events. However, the same individual cannot be part of the team for two different events because of a possible clash in timings. Your aim is to create teams to take part in as many events as possible. To do this, you decide to model the problem as a graph where the nodes are the events and edges represent pairs of events where the team that you plan to send shares a member. In this setting, the graph theoretic question to be answered is

A Find a maximum length simple cycle

B Find a maximum size independent set

Correct Option

Solution :

(b)

C Find a maximum matching

D Find a maximal connected component

QUESTION ANALYTICS

Q. 18

? FAQ

Have any Doubt ?



The degree sequence of a simple graph is the sequence of the degrees of the nodes in the graph in decreasing order. Which of the following sequences can not be the degree sequence of any graph?

A 7, 6, 5, 4, 4, 3, 2, 1

B 6, 6, 6, 6, 3, 3, 2, 2

Correct Option

Solution :

(b)

This can be solved using Havel-Hakimi theorem, which says:

First arrange degree sequence in decreasing order.

Remove 1st vertex, and let its degree be k, then subtract 1 from next k vertices.

If all vertices have degree 0, then answer is yes i.e. given degree sequence can be a degree sequence for a graph. If any vertex has degree < 0, then answer is no, otherwise repeat step 2. So we check each degree sequence given in question :

7, 6, 5, 4, 4, 3, 2, 1. Here first vertex has degree 7, so remove this first vertex, and then subtract 1 from next 7 vertices, so we get 5, 4, 3, 3, 2, 1, 0. Then we get 3, 2, 2, 1, 0, 0, then 1, 1, 0, 0, 0, and then 0, 0, 0, 0. So answer is yes. 6, 6, 6, 6, 3, 3, 2, 2. Here first vertex has degree 6, so remove this first vertex, and then subtract 1 from next 6 vertices, so we get 5, 5, 5, 2, 2, 1, 2. Then we get 4, 4, 1, 1, 0, 2, then 3, 0, 0, -1, 2. Since degree of a vertex becomes negative, this degree sequence is not possible.

C 7, 6, 6, 4, 4, 3, 2, 2

D 4, 4, 4, 3, 3, 2

QUESTION ANALYTICS

Q. 19

Have any Doubt ?



Assume undirected graph G is connected and has 15 vertices and 26 edges. Find the minimum number of edges whose removal from G guarantees that it will become disconnected.

A 12

B 13

Correct Option

Solution :

(b)

Complete graph has $"C_2$ edges. To make a connected graph atleast $(n - 1)$ edges required. To make it disconnected, graph should contain $(n - 2)$ edges.

So, $(e - n + 2)$ edges when removal it guarantees graph is disconnected.

$$26 - 15 + 2 = 13 \text{ edges}$$

C 14

D 15

QUESTION ANALYTICS

Q. 20

Have any Doubt ?



What is the condition for proper edge coloring of a graph?

A Two vertices having a common edge should not have same color.

B Two vertices having a common edge should always have same color.

C No two incident edges should have the same color.

Correct Option

Solution :

(c)

The condition for proper edge coloring of graph is that no two incident edges should have the same color. If it uses k colors in the process then it is called k edge coloring of graph.

D No two incident edges should have different color.

QUESTION ANALYTICS



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CORRECT(0)

INCORRECT(0)

SKIPPED(33)

Q. 21

FAQ

Have any Doubt?



Consider the following predicates for the domain of real numbers:

$P(x, y) : x > y$

$Q(x, y) : x \leq y$

$R(x) : x - 11 = -2$

$S(x) : x > 15$

Which of the following proposition gives the false as the truth value?

(A) $\forall x \exists y P(x, y)$

(B) $\exists x R(x) \vee \forall y [\neg S(y)]$

(C) $\forall x \exists y [P(x, y) \vee Q(x, y)]$

(D) None of these

Correct Option

Solution :

(d)

- $\forall x \exists y P(x, y)$ evaluates to true as there exists a y for every x in the real domain.
- $\exists x R(x) \vee \forall y [\neg S(y)]$ also evaluates to true as $\exists x R(x)$ becomes true when $x = 9$.
- $\forall x \exists y [P(x, y) \vee Q(x, y)]$ also evaluates to true. $\forall x \exists y [x > y \vee x \leq y]$, $x > y$ or $x \leq y$ always satisfies.

QUESTION ANALYTICS



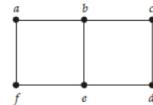
Q. 22

FAQ

Have any Doubt?



Consider the following graph:



The number of spanning trees for the above graph is

(A) 5

(B) 21

(C) 15

Correct Option

Solution :

(c)

Number of vertices in the graph = 6

So, number of edges in spanning tree = 5

- We take 5 edges out of 7 edges then it will be a spanning tree except those case where a cycle is taken.

So, total spanning tree possible = ${}^7C_5 - {}^3C_1$ (when 'bcfed' taken) - 3C_1 (when 'abef' taken) = 15

(D) 12

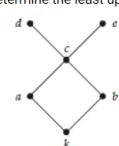
QUESTION ANALYTICS



Q. 23

FAQ

Have any Doubt?

Determine the least upper bound and greatest lower bound of $B = \{a, b, c\}$ if they exist, of the poset whose Hasse diagram is shown in figure:

(A) c and c respectively

(B) Least upper bound is not possible here

(C) c and k respectively

Correct Option

Solution :
 (c)
 The least upper bound is c .
 The greatest lower bound is k .

D $\{d, e\}$ and $\{k\}$ respectively

QUESTION ANALYTICS

+

Q. 24

? FAQ Have any Doubt ?

Consider the following statements:
 $P_1: \exists x \exists y (\text{Orange}(x) \wedge \text{Orange}(y) \wedge (x \neq y) \wedge \forall z (\text{Orange}(z) \rightarrow (z = x) \vee (z = y)))$
 $P_2: \exists x \exists y (x \neq y \wedge \forall z (\text{Orange}(z) \leftrightarrow ((z = x) \vee (z = y)))$

Which of the above predicate statements represents the following statement?
 "There are exactly two oranges".

A P_1 only

B P_2 only

C Both P_1 and P_2

Correct Option

Solution :

(c)
 Both P_1 and P_2 are representing "There are exactly two oranges".

D None of these

QUESTION ANALYTICS

+

Q. 25

Have any Doubt ?

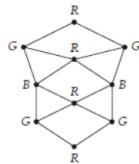
What will be the chromatic number of the following graph? _____



C 3

Correct Option

Solution :
 3



The given graph will require 3 unique colors so that no two vertices connected by a common edge will have the same color. So its chromatic number will be 3.

QUESTION ANALYTICS

+

Q. 26

Solution Video Have any Doubt ?

The minimum number of JK flip-flops required to construct a synchronous counter with the count sequence (0, 0, 1, 1, 2, 2, 3, 3, 0, 0, ...) is _____.

C 3

Correct Option

Solution :
 3

From the design a counter for 0, 1, 2, 3. It is a MOD-4 counter. Hence, number of flip-flops required will be two. Count sequence will be: 00, 01, 10, 11

Count sequence mentioned is: 00, 00, 01, 01, 10, 10, 11, 11

Now, two flip-flops won't suffice, since we are confronted with repeated sequence, we may add another bit to the above sequence:

000

100

001

101

010

110

011

Now each and every count is unique, occurring only once. Meanwhile, our machine has been extended to a MOD-8 counter. So the 3 flip-flops would do.
Just neglect the MSB flip-flop output and take the output of other two flip-flop.
So, we have : 0, 0, 1, 1, 2, 2, 3, 3, repeat →.

QUESTION ANALYTICS

Q. 27

[FAQ](#)
[Have any Doubt?](#)

A twisted ring counter is implemented using 4 D-flip-flops. If each FF has 40 nsec of delay, what is the maximum usable clock frequency which ensures that there are no timing violations? _____ (in MHz)

25

Correct Option

Solution :

25

$$\text{Total delay} = 40 \text{ ns}$$

$$\Rightarrow F_{\text{clk}} = \frac{1}{40 \text{ ns}}$$

$$\Rightarrow F_{\text{clk}} = \frac{1000}{40} \text{ MHz}$$

$$\Rightarrow F_{\text{clk}} = 25 \text{ MHz}$$

QUESTION ANALYTICS

Q. 28

[FAQ](#)
[Solution Video](#)
[Have any Doubt?](#)

In a 8 bit SISO register, if 16-bit data 1011 0101 0010 1010 is applied at the input. The minimum number of clock pulses required to transfer 16 bit data at the output is

23

Correct Option

Solution :

23

Given that 8 bit SISO register $n = 8$, input data $= N = 6$ bits.
After applying of 16th clock pulse out of 16 bit data 8 will already transferred and remaining 8 will be inside register, so to transfer these 8 we need 7 more clock pulse, so total $= 16 + 7 = 23$

Minimum number of clock pulse $= N + (n - 1) = 16 + 8 - 1 = 23$.

QUESTION ANALYTICS

Q. 29

[Solution Video](#)
[Have any Doubt?](#)

How many 3-to-8 line decoders with an enable input are needed to construct a 6-to-64 line decoder without using any other logic gates?

9

Correct Option

Solution :

9

To get 6:64 we need 64 o/p

We have 3 : 8 decode with 8 o/p. so we need $\frac{64}{8} = 8$ decoders

Now to select any of this 8 decoder we need one more decoder.

Total $= 8 + 1 = 9$ decoders.

QUESTION ANALYTICS

Q. 30

[FAQ](#)
[Have any Doubt?](#)

Assume that 'e' is the number of edges and n is the number of vertices. The number of nonisomorphic graphs possible with n-vertices such that graph is 3 regular graph and $e = 2n - 3$ are _____.

2

Correct Option

Solution :

2

For 3 regular graph

$$3n = 2e$$

$$\text{Given, } e = 2n - 3$$

$$\text{So, } 3n = 2(2n - 3)$$

$$3n = 4n - 6$$

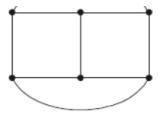
$$n = 6 \text{ [number of vertices]}$$

$$e = 2n - 3$$

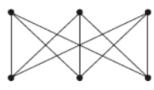
$$= 2 \times 6 - 3 = 9$$

Number of 3 regular graph with $n = 6$ and $e = 9$ are





and



The above 2 graphs are non-isomorphic.

QUESTION ANALYTICS

+

Item 21-30 of 33 « previous 1 2 3 4 next »



Kunal Jha

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Computer Science Engineering(CS)

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ALL(33)

CORRECT(0)

INCORRECT(0)

SKIPPED(33)

Q. 31

▶ Solution Video

Have any Doubt ?



A multiplexer

A Selects one of the several inputs and transmit it to a single output.

Correct Option

B Routes the data from a single input to one of many output.

C Converts parallel data into serial data.

Correct Option

D Is a combinational circuit.

Correct Option

YOUR ANSWER - NA

CORRECT ANSWER - a,c,d

STATUS - SKIPPED

Solution :

(a, c, d)

Multiplexer is a combinational circuit, converts parallel to serial data and it selects one of the several inputs and transmits to a single output.

QUESTION ANALYTICS



Q. 32

FAQ

▶ Solution Video

Have any Doubt ?

Which one of the following expressions does represent exclusive NOR of x and y ?A $xy + x'y'$

Correct Option

B $x \oplus y'$

Correct Option

C $x' \oplus y$

Correct Option

D $x' \oplus y'$

YOUR ANSWER - NA

CORRECT ANSWER - a,b,c

STATUS - SKIPPED

Solution :

(a, b, c)

By Definition of XNOR = $x' y' + xy$

So option (a) is correct.

Also by Definition of XOR = $x' y + xy'$ Option (b) = $x' y + x(y')' = x' y' + xy = x \odot y$

So option (b) is also correct.

Option (c) = $(x')' y + x' y' = x' y' + xy$

Option (c) is also correct.

Option (d) $x' \oplus y' = x''y' + x'y'' = xy' + x'y = x \oplus y * x \odot y$

QUESTION ANALYTICS



Q. 33

FAQ

▶ Solution Video

Have any Doubt ?



The Excess-3 decimal code is a self-complementing code because

A The binary sum of a code and its 9's complement is equal to 9.

Correct Option

B It is a weighted code.

C Complement can be generated by inverting each bit pattern.

Correct Option

D The binary sum of a code and its 10's complement is equal to 9.

YOUR ANSWER - NA

CORRECT ANSWER - a,c

STATUS - SKIPPED

Solution :

(a, c)

The Excess-3 decimal code is a self-complementing code because the binary sum of a code and its 9's complement is equal to 9 and complement can be generated by inverting each bit pattern.

