

ion 20

et answered

ed out of

g question

Find the answer for the following binary multiplication.

$$11100011 \times 101$$

Select one:

- 10001101111
- 11111111001
- 10101100000
- 010010100110
- None of the above.

NetExam

Sri Lanka Institute of Information Technology

Simplify the following boolean expression.

$$\bar{A} \bar{B} \bar{C} + A \bar{B} \bar{C} + \cancel{\bar{A} \bar{B} \bar{C}} + \cancel{\bar{A} \bar{B} \bar{C}}$$

Select one:

- $\bar{A} \bar{B} \bar{C}$
-
- $\bar{B} \bar{C}$
- $(\bar{A} + \bar{B}) \bar{C}$
- $(A + \bar{B}) \bar{C}$
- None of the above





21

answered
out of

question

Convert the number 1061_8 to equivalent decimal numbers.

Select one:

- 561
- 692
- 298
- 332
- None of the above.



stion 22

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Flag question

$$A = 101010111 + 100010$$

Find the 2's Complement of A.

(No spaces should be there in your answer)

Answer:

0|000111

on 23
t answered
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g question

Simplify the following boolean expression.

$$ABC + \overline{A}B + ABC$$

~~AB~~

Select one:

- A
- B
- AB
- BC
- None of the above



Question 19

Not yet answered

Marked out of
1.00

Flag question

Convert the number 273.25_{10} to the equivalent binary number.

Select one:

- 100010001.01
- 100010001.111
- 100101100.11
- 1111101.001
- None of the above.

20
Answered
out of
question

Find the answer for the following binary multiplication.

$$11100011 \times 101$$

Select one:

- 10001101111
- 11111111001
- 10101100000
- 010010100110
- None of the above.

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Find the value of the following definite integral.

$$\int_0^3 |3t - 5| dt$$

Select one:

- 20
- 30/6
- 41/6
- 42/6
- None of the above





Find the value of the following definite integral:

$$\int_{1}^{4} |3x - 6| \, dx$$

Select one:

- 15/2
- 7/2
- 0
- 12/4
- None of the above

The inverse of function

$$f(x) = x^3 + 2 \quad \text{is } \underline{\hspace{2cm}}$$

Select one:

$f^{-1}(x) = (x - 2)^{1/2}$

$f^{-1}(x) = (x - 2)^{1/3}$

$f^{-1}(x) = x^{1/3}$

$f^{-1}(x) = x - 2$

None of the above



1

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question

Find the value of the following definite integral.

$$\int_0^3 |3t - 5| dt$$

Select one:

- 20
- 30/6
- 41/6
- 42/6
- None of the above



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question

The inverse of function $f(x) = x^3 + 2$ is _____.

Select one:

- $f^{-1}(x) = (x - 2)^{1/3}$
- $f^{-1}(x) = (x - 2)^{1/2}$
- $f^{-1}(x) = x^{1/3}$
- $f^{-1}(x) = x - 2$
- None of the above

Question 4

Not yet answered

Marked out of
1.00 Flag question

Find the value of the following definite integral.

$$\int_{-1}^1 \frac{x^2 - \sqrt{25x^2}}{x} dx$$

Select one:

- 10
-  10
- 0
- 1
- None of the above

Select the suitable answer for each blank.

Proof: $a(a + b)$

$$= (a+0)(a + b) \quad |(1)$$

$$= a+0\cdot b \quad (2)$$

$$= a + 0 \quad (3)$$

$$= a \quad (4)$$

+ + +
Distributive Law
N + A ||
Identity

Answer 1

Identity Law

Answer 2

Choose...

Answer 3

Choose...

- Identity Law
- Identity Law
- Inverse Law
- De Morgan's Law
- Commutative Law
- Universal Bound Law
- Distributive law
- Distributive Law
- Associative Law

Answer 4



Question 18

Not yet answered

Marked out of
1.00

Flag question

Find the answer for the following binary division.

$$10101010 \div 11$$

Select one:

- Quotient = 1011000 & Remainder = 01
- Quotient = 0111000 & Remainder = 01
- Quotient = 0111000 & Remainder = 10
- Quotient = 1011000 & Remainder = 11
- None of the above.



Question 22

Not yet answered

Marked out of

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Flag question

$$A = 111011 + 10001010$$

Find the 2's Complement of A.

(No spaces should be there in your answer)

Answer: 00111011 |

3

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estion

Simplify the following boolean expression.

$$\overline{A} \overline{B} \overline{C} + A \overline{B} \overline{C} + \overline{A} \overline{B} \overline{C} + \overline{A} \overline{B} \overline{C}$$

Select one:

- $\overline{A} \overline{B} \overline{C}$
-
- $(\overline{A} + \overline{B}) \overline{C}$
- $(A + \overline{B}) \overline{C}$
- None of the above

Consider the following function.

$$g: R \rightarrow R \quad g(x) = \frac{(5x - 9)}{2}$$

Find $g^{-1}(3)$

Hint : Find the inverse of g and substitute -5.

Answer:

3

I

Online Exams

Sri Lanka Institute of Information Technology

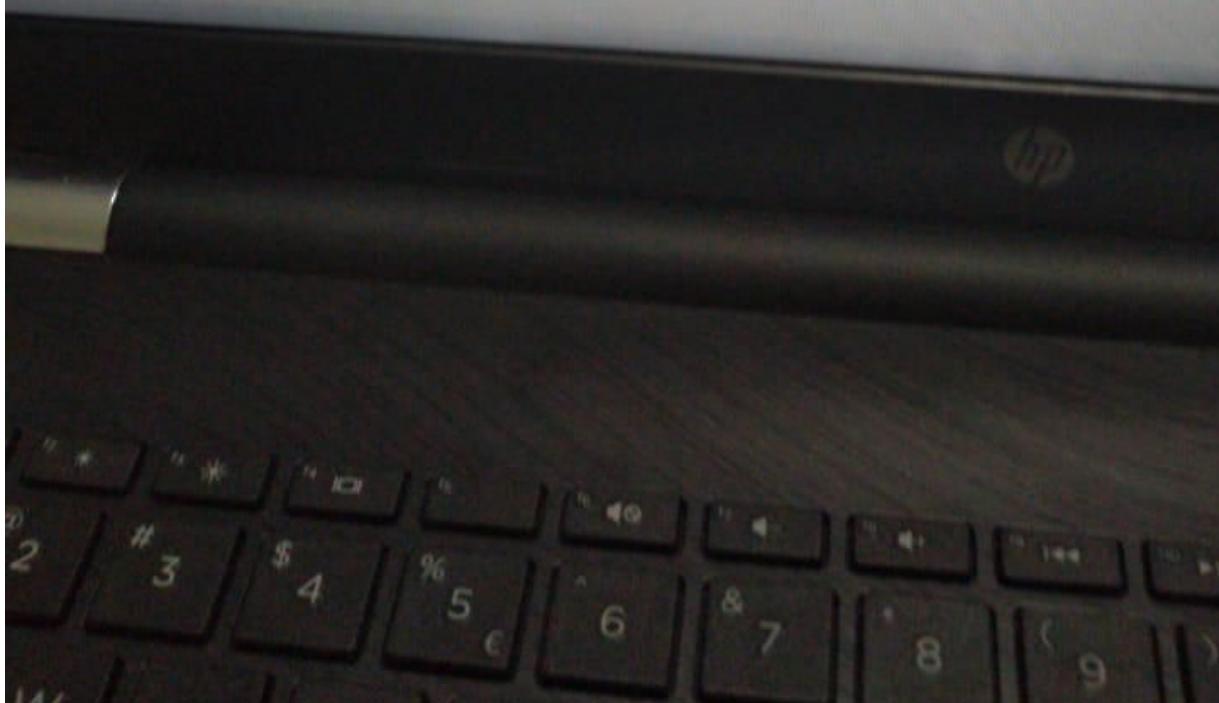
N Refers to all the positive integers. (Called as Natural Numbers)

$$f: N \rightarrow N \quad f(n) = x^4 - 2x + 1$$

Is f a One to one function? Choose...

Is f an onto function? Choose...

Does f has an inverse function? Choose...



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Question 6

Not yet answered

Marked out of
1.00 Flag questionDifferentiate the following function with respect to x ,

$$(\sqrt{x} - 3)(x^2 - 3x)$$

Select one:

- $\sqrt{x}(5x - 9) - 6x + 9$
- $$\frac{\sqrt{x}(5x - 9) - 16x + 24}{2}$$
- $$\frac{\sqrt{x}(5x - 6) - 16x + 16}{2}$$
- $$\frac{\sqrt{x}(5x - 9) - 12x + 18}{2}$$
- None of the above

Question 9

Not yet answered

Marked out of
1.00

Flag question

Simplify

$$\int (x^3 - 6x + 8) dx$$

Select one:

$\frac{x(x^3 - 12x + 32)}{4} + C$

$\frac{x^4}{4} + x^2 + 5x + C$

$\frac{x(x^3 - 4x + 12)}{4} + C$

$\frac{x(x^3 - 4x - 8)}{4} + C$

 None of the above

$x^4 + 3x^2 + 5x + C$

~~$\cancel{x^4}$~~



Find the dual of the following expression.

$$(a + 0).(b + 1) = a$$

Select one:

- (a.1)+(b.0)=a
- (a.1)(b.0)=a
- (a.1)+(b.1)=a
- (a.1)+(b.0)=b
- None of the above

Find,

$$\frac{d}{dx} \left[(\sqrt{x} - 3) (x^2 - 5x) \right]$$

Select one:

$\frac{\sqrt{x}(5x-18)-12x+36}{2}$

$\frac{\sqrt{x}(5x-15)-12x+30}{2}$

$\frac{\sqrt{x}(5x-18)-16x+48}{2}$

$\frac{\sqrt{x}(5x-3)-16x+8}{2}$

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Select the suitable answer for each blank.

Proof: $a(a + b)$

$$= (a+0)(a + b) \quad |(1)$$

$$= a+0\cdot b \quad |(2)$$

$$= a + 0 \quad |(3)$$

$$= a \quad |(4)$$

Answer 1

Choose...

Answer 2

Choose...

Answer 3

Choose...

Answer 4

Choose...

12

Answered
out of
question

Select the suitable answer for each blank.

$$Q = (A + B)(A + C)$$

$$A(A + A.C + A.B + B.C) \quad - \text{Distributive law}$$

$$A + A.C + A.B + B.C$$

- 1

ID 0 0

$$A(1 + C) + A.B + B.C \quad - \text{Distributive law}$$

$$A.1 + A.B + B.C$$

- 2

1 0 0

$$A(1 + B) + B.C \quad - \text{Distributive law}$$

$$A.1 + B.C$$

- 3

1

$$Q = A + (B.C)$$

- 4

1

Answer 1

Choose...

Choose...

De Morgan's Law

Universal Bound Law

Associative Law

Distributive law

Commutative Law

Inverse Law

Idempotent Law

Identity Law

Answer 2

Answer 3

Answer 4



Question 13

Not yet answered

Marked out of

.00

[Flag question](#)

A committee of three individuals decides issues for an organization. Each individual votes either yes or no for each proposal that arises. A proposal is passed if it receives at least two yes votes. Assume that you design a circuit that determines whether a proposal passes. What is the boolean expression which matches the above circuit.

Select one:

$$\bar{X}YZ + X\bar{Y}\bar{Z} + XY\bar{Z} + XYZ$$

$$\bar{X}YZ + X\bar{Y}Z + XY\bar{Z} + XYZ$$

$$\bar{X}Y\bar{Z} + X\bar{Y}\bar{Z} + XY\bar{Z} + XYZ$$

$$\bar{X}Y\bar{Z} + X\bar{Y}\bar{Z} + XY\bar{Z} + \bar{X}YZ$$

None of the above

[Next page](#)

Select the suitable answer for each blank.

Proof: $a(a + b)$

$$= (a+0)(a + b) \quad (1)$$

$$= a+0\cdot b \quad (2)$$

$$= a + 0 \quad (3)$$

$$= a \quad (4)$$

Answer 1 Choose...

Answer 2 Choose...

Answer 3 Choose...

Answer 4 Choose...

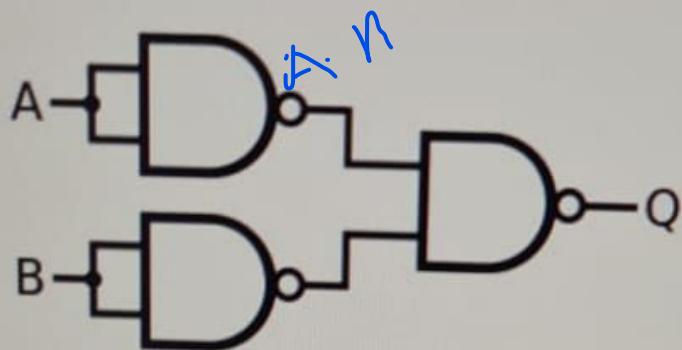
2 3 4 5 6 7 8 9 0

W E R T Y U I O

S D F G H J K L



Following circuit is equivalent to,



Select one:

- OR Gate
- NOR Gate
- NAND Gate
- NOT Gate
- None of the above

DELL





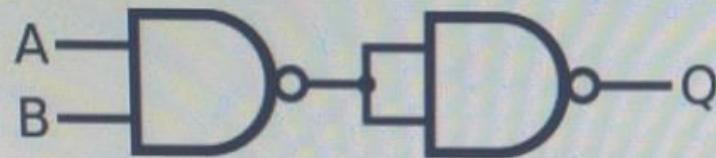
Question 14

Not yet answered

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1.00

Flag question

Following circuit is equivalent to;



Select one:

- OR Gate
- AND Gate
- NOR Gate
- NAND Gate
- None of the above



Select the Correct Answer.

A variant of Universal Bound Law is,

B + 1 = 1

C + 0 = C

A Variant of Identity Law is,

A . A = A



**Question 13**

Not yet answered

Marked out of
1.00

Flag question

A committee of three individuals decides issues for an organization. Each individual votes either yes or no for each proposal that arises. A proposal is passed if it receives at least two yes votes. Assume that you design a circuit that determines whether a proposal passes. What is the boolean expression which matches the above circuit.

Select one:

- $\bar{X}Y + XZ + YZ$
- $XYZ + XZ$
- $XY + XZ$
- $X.(Y+Z)$
- None of the above

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Finish at

Time left

1
9
17

Next page



Question 17

Not yet answered

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1.00

Flag question

Convert the number 168_{10} to a base 5 number system.

Select one:

- 2200
- 4412
- 1133
- 2002
- None of the above.



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Calculate the 1's complement for the following binary number.

1001101101001

Select one:

- 11101101100011
- 10111111001111
- 111000100110
- 110010010110
- None of the above.



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2

Answered.
of
Question

$$A = 100011 + 10001110$$

Find the 2's Complement of A.

(No spaces should be there in your answer)

Answer:

6
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Calculate the 1's complement for the following binary number.

1001101101001

Select one:

- 11101101100011
- 10111111001111
- 111000100110
- 110010010110
- None of the above.



Find the answer for the following binary multiplication.

10101010×111

Select one:

- 11101101101
- 11111111001
- 10101100000
- 010010100110
- None of the above.



Convert the number 167_{10} to a base 11 positional number system.

Select one:

- 20A
- 812
- 113
- 11B
- None of the above.

A Samsung tablet is shown from a top-down perspective, displaying a digital exam application and a video player interface.

The digital exam application (NetExam) has the following details:

- Header:** NetExam, Sri Lanka Institute of Information Technology
- Question 27:** Convert the number 1010110100_2 to equivalent decimal numbers.
- Instruction:** Select one:
- Options:**
 - 561
 - 692
 - 298
 - 322
 - None of the above.
- Bottom Left:** Not yet answered, Marked out of 1.00, Pending question

To the right of the exam app is a video player interface showing the following:

- Video:** www.youtube.com • 43m
- Summary:** The Tonight Show Starring Jimmy Fallon
- Details:** Elisabeth Moss Teases Season 3 of Handmaid's Tale | The Tonight Show Starring Jimmy Fallon
- Bottom Right:** www.youtube.com • 14m
- Summary:** The Tonight Show Starring Jimmy Fallon
- Details:** Audience Reactions to The Handmaid's Tale | The Tonight Show Starring Jimmy Fallon

A blue "Next page" button is located in the upper right corner of the exam application.



Convert the number 221122_3 to equivalent decimal numbers.

Select one:

- 561
- 692
- 298
- 332
- None of the above.

on 18

answered

d out of

g question

Find the answer for the following binary division.

$$10101010 \div 10$$

Select one:

- Quotient = 1011000 & Remainder = 00
- Quotient = 01010101 & Remainder = 01
- Quotient = 01010101 & Remainder = 00
- Quotient = 1011000 & Remainder = 10
- None of the above.



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$$A = 100011 + 10001110$$

Find the 2's Complement of A.

(No spaces should be there in your answer)

Answer:

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Quiz navigation

Finish attempt ...
Time left 0:03:22

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22	23		

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Question 22
Not yet answered
Marked out of 1.00
Flag question

A = 100011 + 10001110
Find the 2's Complement of A.
(No spaces should be there in your answer)
Answer:

Convert the number 100111.1101_2 to the equivalent decimal number.

Select one:

- 37.9375
- 39.8125
- 55.3125
- 49.6875
- None of the above.