



NetExam

Sri Lanka Institute of Information Technology

Question 16

Not yet answered

Marked out of
4.00

Flag question

Find the number of terms in the geometric progression
6, 12, 24, ..., 1536

$n =$

Find the 10th Element of the above sequence.
 $a_{10} =$

Moodle

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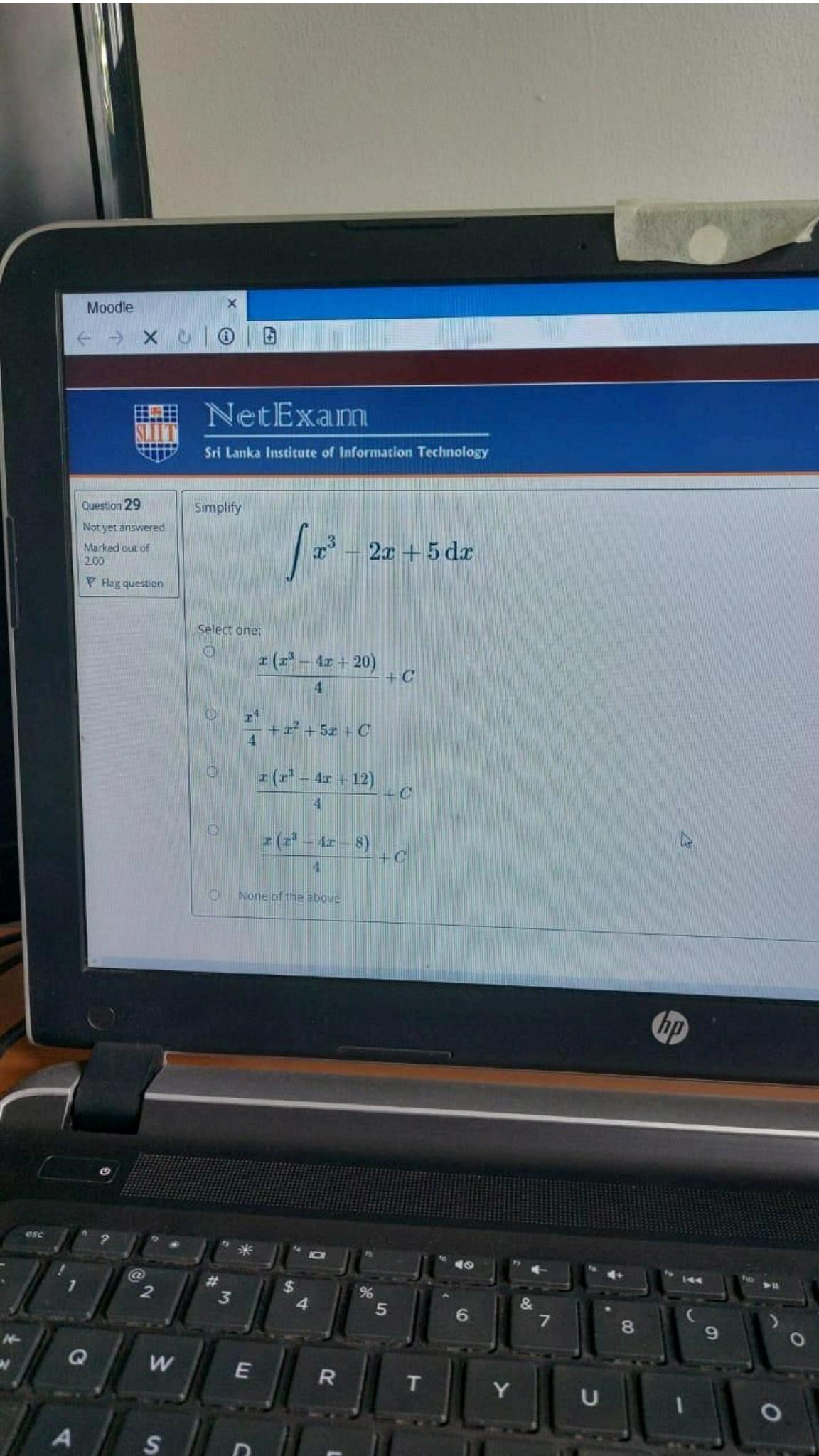
Question 29
Not yet answered
Marked out of 2.00
[Flag question](#)

Simplify $\int x^3 - 2x + 5 \, dx$

Select one:

- $\frac{x(x^3 - 4x + 20)}{4} + C$
- $\frac{x^4}{4} + x^2 + 5x + C$
- $\frac{x(x^3 - 4x + 12)}{4} + C$
- $\frac{x(x^3 - 4x - 8)}{4} + C$
- None of the above

hp



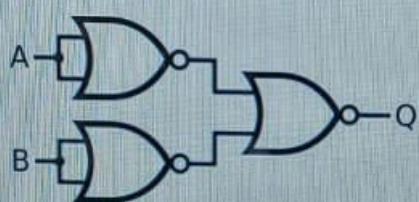
Question 28

Not yet answered

Marked out of
1.00

Flag question

Following circuit is equivalent to:



Select one:

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





Question 29

Not yet answered

Marked out of
4.00

Flag question

Consider the following geometric sequence.

1, 3, 9, 18, ...

$$S_8 = \boxed{}$$

$$a_8 = \boxed{}$$

FULL
HD

1080

Esc

F1 Z

F2 (v₁)

F3 *

F4

F5

F6

F7

F8

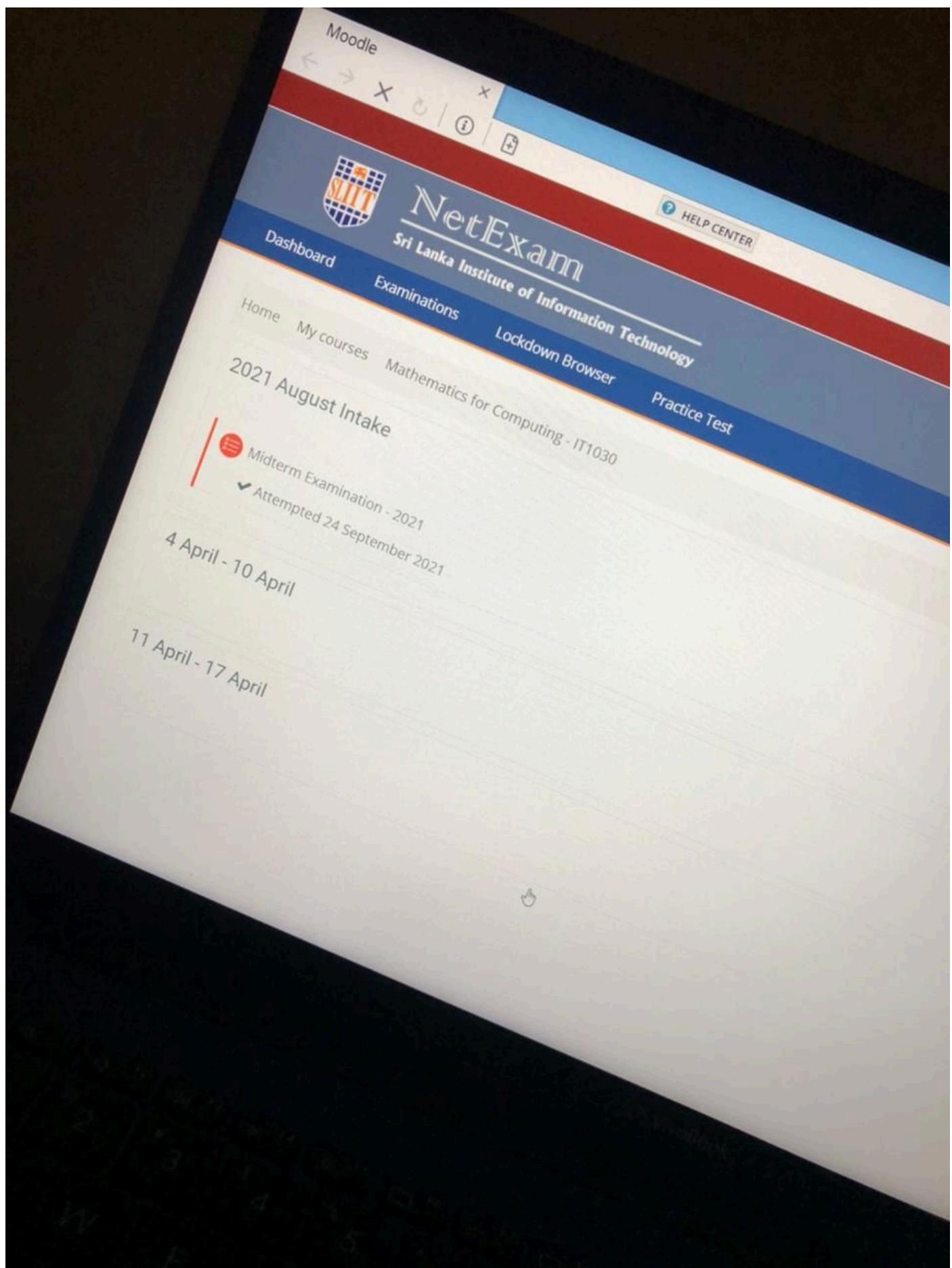
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Moodle

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Question 26
Not yet answered
Marked out of 0.00
Flag question

Find the numerical part of the 7th term of $(2+x)^{10}$

Select one:

- 3630
- 3366
- 3636
- 3360
- None of the above

hp



Question 29

Not yet answered

Marked out of
1.00

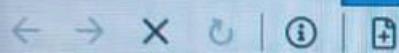
Flag question

Assume that you have to design a circuit for a light fixture controlled by three switches, where flipping one of the switches turns it on. Select the answer which gives the boolean expression for the above circuit.

Select one:

- $X\bar{Y}Z + X\bar{Y}\bar{Z} + \bar{X}YZ + \bar{X}\bar{Y}Z$
- $XYZ + X\bar{Y}\bar{Z} + \bar{X}YZ + \bar{X}\bar{Y}Z$
- $X\bar{Y}Z + \bar{X}\bar{Y}\bar{Z} + \bar{X}YZ + \bar{X}\bar{Y}Z$
- $\bar{X}YZ + X\bar{Y}\bar{Z} + \bar{X}Y\bar{Z} + \bar{X}\bar{Y}Z$
- None of the above

Moodle



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Question 24

Not yet answered

Marked out of
2.00

Flag question

Calculate the following.

$$^{10}C_5 = \boxed{}$$

$$^{10}P_5 = \boxed{}$$

**Question 19**

Not yet answered

Marked out of
2.00

Flag question

Find,

$$\int (x^3 - 5x + 8) dx$$

Select one:

- $\frac{x(x^3 - 10x + 20)}{4} + C$
- $\frac{x(x^3 - 10x + 24)}{4} + C$
- $\frac{x(x^3 - 10x + 32)}{4} + C$
- $\frac{x(x^3 - 10x - 12)}{4} + C$
- None of the above



Question 23

Not yet answered

Marked out of
4.00

Flag question

Consider the following arithmetic sequence.

8, 13, 18, 23, 28, ...

$$S_{45} = \boxed{}$$

Find 40th element.

$$a_{35} = \boxed{}$$



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lag question

Find,

$$\frac{d}{dx} \left[\frac{x^2 - 7}{2x + 1} \right]$$

Select one:



$$\frac{2(x^2 + x + 5)}{(2x + 1)^2}$$



$$\frac{2(x^2 + x + 6)}{(2x + 1)^2}$$



$$\frac{2(x^2 + x + 7)}{(2x + 1)^2}$$



$$\frac{2(x^2 + x + 2)}{(2x + 1)^2}$$



None of the above

oodle



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A	B	C	F
0	0	0	1
0	0	1	0
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

- a) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot C + A \cdot B \cdot \bar{C}$
- b) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot \bar{C} + A \cdot B \cdot \bar{C}$
- c) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot C + A \cdot B \cdot C$
- d) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot \bar{C}$
- e) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot \bar{C} + A \cdot \bar{B} \cdot C + A \cdot B \cdot \bar{C}$
- f) $(\bar{A} + B + C^*).(\bar{A} + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$
- g) $(A + B + \bar{C}).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$
- h) $(A + B + \bar{C}).(A + \bar{C} + B^*).(B + C + \bar{A}).(\bar{A} + \bar{C} + B)$
- i) $(A + B + \bar{C}).(A + C + \bar{B}).(B + \bar{C} + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$
- j) $(A + B + \bar{C}).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$



What is the SOP expression of the above truth table ?

Choose...



What is the POS expression of the above truth table ?

Choose...





Question 21

Not yet answered

Marked out of
2.00

Flag question

Calculate the following.

$$^{11}C_4 = \boxed{\hspace{2cm}}$$

$$^{11}P_4 = \boxed{\hspace{2cm}}$$



Moodle

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Question 28

Not yet answered

Marked out of
1.00

Flag question

Calculate the 2's complement for the following binary number.
101010111111

Select one:

- 11101101100011
- 10111111001111
- 10101100001100
- 0101010000001
- None of the above.



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17

answered
out of
question

Find the dual of the following expression.

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

Select one:

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



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Question 18

Not yet answered

Marked out of
4.00

Flag question

Consider the following geometric sequence.
1, 3, 9, 18, ...

$$S_8 = \boxed{\quad}$$

$$a_8 = \boxed{\quad}$$



**Question 18**

Not yet answered

Marked out of
1.00

Flag question

A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected if the team has no girls.

Answer = **≡ Quiz navigation**[Finish attempt ...](#)

Time left 0:22:33

1	2	3	4	5	6
8	9	10	11	12	13
15	16	17	18	19	
22	23	24	25	26	
29	30				

[Next page](#)

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Differentiate with respect to t,

$$24t^2 + \frac{1}{t^{\frac{3}{2}}} - 3$$

Select one:

- $24t - \frac{3}{2t^{\frac{5}{2}}}$
- $48t - \frac{3}{2t^{\frac{5}{2}}} - 3$
- $48t - \frac{3}{2t^{\frac{5}{2}}}$
- $48t + \frac{3\sqrt{t}}{2} - 3$
- None of the above



Question 18

yet answered

Marked out of

0

Flag question

Find the number of terms in the geometric progression

6, 12, 24, ..., 1536

$$n = \boxed{}$$

Find the 10th Element of the above sequence.

$$a_{10} = \boxed{}$$

Question 25

Not yet answered

Marked out of
0.00 Flag question

A	B	C	F
0	0	0	1
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	0
1	0	1	0
1	1	0	1
1	1	1	0

- a) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot C + A \cdot B \cdot \bar{C}$
- b) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot \bar{B} \cdot C + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot \bar{C}$
- c) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot C + A \cdot B \cdot C$
- d) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot B \cdot C + A \cdot \bar{B} \cdot C + \bar{A} \cdot B \cdot \bar{C}$
- e) $\bar{A} \cdot \bar{B} \cdot \bar{C} + \bar{A} \cdot \bar{B} \cdot C + \bar{A} \cdot B \cdot C + A \cdot B \cdot \bar{C}$
- f) $(A + \bar{B} + C) \cdot (\bar{A} + \bar{C} + B) \cdot (\bar{B} + C + \bar{A}) \cdot (\bar{A} + \bar{C} + \bar{B})$
- g) $(A + \bar{B} + C) \cdot (\bar{A} + C + B) \cdot (B + \bar{C} + A') \cdot (\bar{A} + \bar{C} + \bar{B})$
- h) $(A + \bar{B} + C) \cdot (A + C + B') \cdot (B + C + \bar{A}) \cdot (\bar{A} + C + \bar{B})$
- i) $(A + B + \bar{C}) \cdot (A + C + \bar{B}) \cdot (B + \bar{C} + \bar{A}) \cdot (\bar{A} + \bar{C} + \bar{B})$
- j) $(A + B + \bar{C}) \cdot (A + C + \bar{B}) \cdot (B + C + \bar{A}) \cdot (\bar{A} + C + \bar{B})$

What is the SOP expression of the above truth table ?

 Choose... ▾

What is the POS expression of the above truth table ?

 Choose... ▾

$$\begin{aligned}A + \overline{A}B &= A I + \overline{A}B \\&= A(1+B) + \overline{A}B \quad (\text{---1---}) \\&= A + AB + \overline{A}B \quad (\text{---2---}) \\&= A + B(A + \overline{A}) \quad (\text{---3---}) \\&= A + B \quad (\text{---4---})\end{aligned}$$

- Answer 1 Absorption Law
- Answer 2 Distributive Law
- Answer 3 Distributive Law
- Answer 4 Inverse Law



Question 16

Not yet answered

Marked out of

0

Flag question

In a small village, there are 15 families, of which 10 families have at most 2 children. In a rural development programme 8 families are to be chosen for assistance, of which at least 6 families must have at most 2 children. In how many ways can the choice be made?

Answer :

[Next page](#)

Select the Correct Answer.

A variant of Commutative Law is,

A Variant of Associative Law is,

A Variant of Absorption Law is,

B. $(B + C) = C$

Choose...

A. $(A + C) = A$

$(A \cdot B) + C = A + (B \cdot C)$

$A \cdot (B \cdot C) = (A \cdot B) \cdot (A \cdot C)$

$(A + B) = (B + A)$

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

B. $(B + C) = C$



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15

answered
out of
question

Calculate the following.

$${}^{10}C_5 = \boxed{}$$

$${}^{10}P_5 = \boxed{} I$$

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Find the coefficients of x^2 in the expansion of $(1-2x)^5$

Select one:

- 20
- 42
- 40
- 25
- None of the above



Moodle ← → X ⌂ ⓘ ⓘ

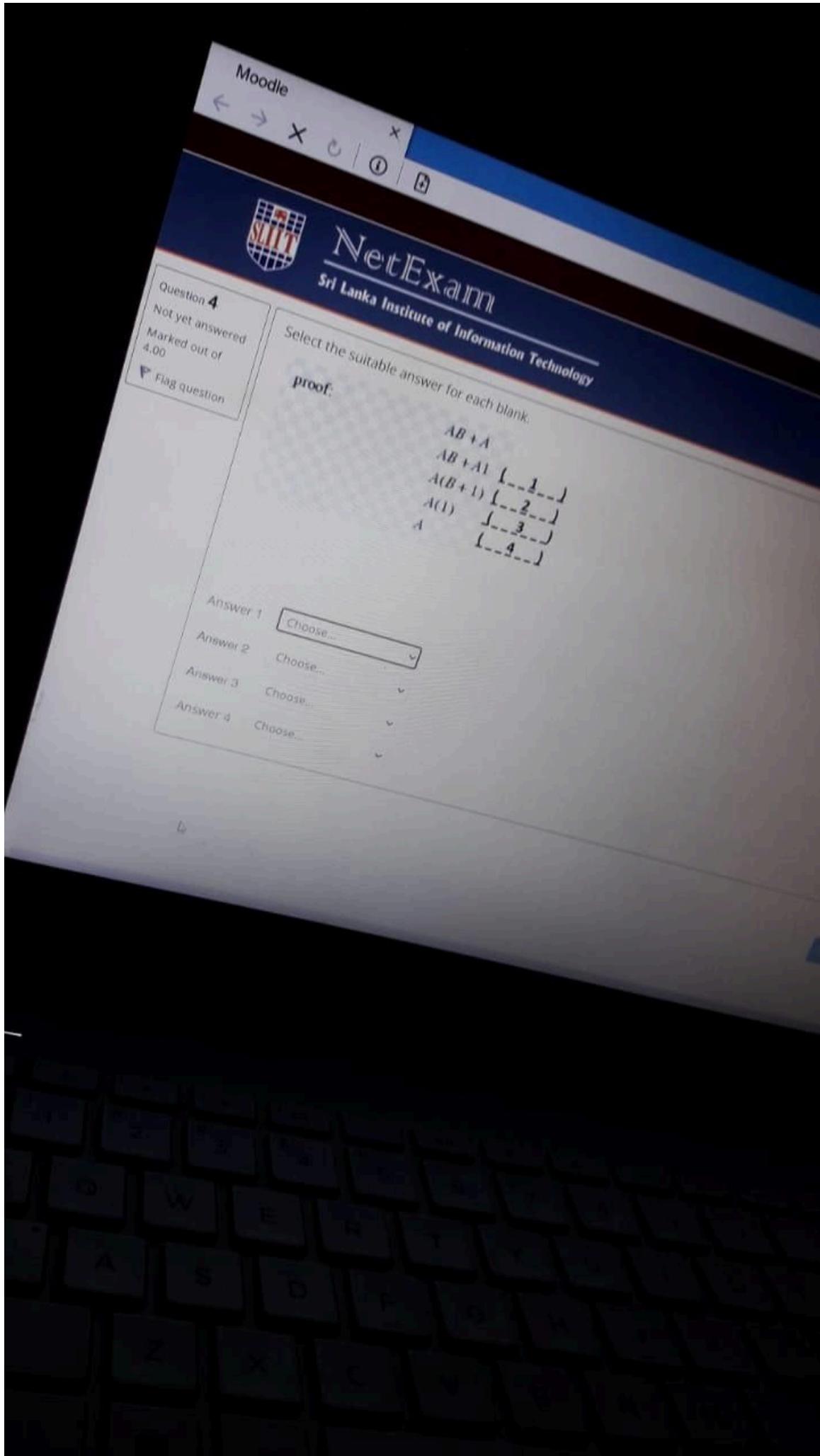
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Question 4
Not yet answered
Marked out of 4.00
Flag question

Select the suitable answer for each blank.
proof:

$AB + A$
 $AB + A1$ 1
 $A(B+1)$ 2
 $A(I)$ 3
 A 4

Answer 1 Choose...
Answer 2 Choose...
Answer 3 Choose...
Answer 4 Choose...





Question 11

Not yet answered

Marked out of
1.00

Flag question

Find the coefficients of x^2 in the expansion of $(1-2x)^5$

Select one:

- 20
- 42
- 40
- 25
- None of the above



Next pag

Differentiate following function with respect to x

$$\frac{x^2 - 3}{2x + 1}$$

Select one:

- $\frac{2(x^2 + x + 4)}{(2x + 1)^2}$
- $\frac{2(x^2 + x + 3)}{(2x + 1)^2}$
- $-\frac{2(x^2 + x + 1)}{(2x + 1)^2}$
- $-\frac{2(x^2 - x + 6)}{(2x + 1)^2}$
- None of the above

**Question 9**

Not yet answered

Marked out of
2.00

Flag question

Calculate the following.

$${}^{10}C_6 = \boxed{ }$$

$${}^{10}P_6 = \boxed{ }$$



Question 14

Not yet answered

Marked out of
2.00

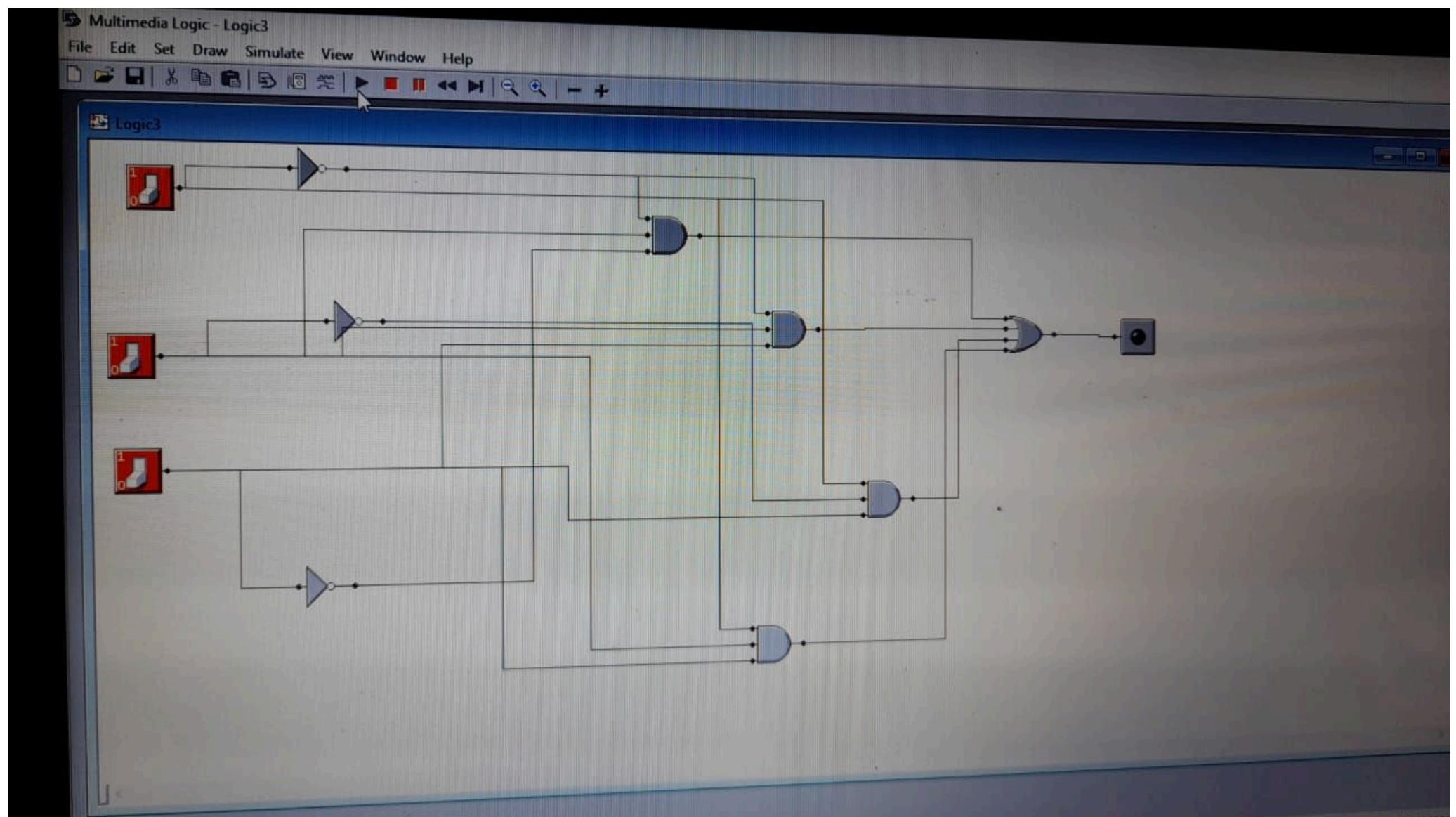
Flag question

Differentiate, with respect to x,

$$f(x) = (2x - 1)^4 + (x^2 - 2)^2$$

Select one:

- $68x^3 - 96x^2 + 36x - 8$
- $68x^3 - 288x^2 + 424x - 216$
- $68x^3 - 192x^2 + 184x - 64$
- $68x^3 - 96x^2 + 40x - 8$
- None of the above



An event planner offers two birthday party packages for their clients depends on the items required by the client. The package details are given in the following table.

Package No	Items included to the package	Price
1	Birthday cake, balloon decorations	15000.00
2	Birthday cake, flower decorations	30000.00

The clients can also order the food for the party from the following table.

Food type	Description	Price per person
S	Snack	1500.00
D	Dinner	3000.00
L	Lunch	2500.00

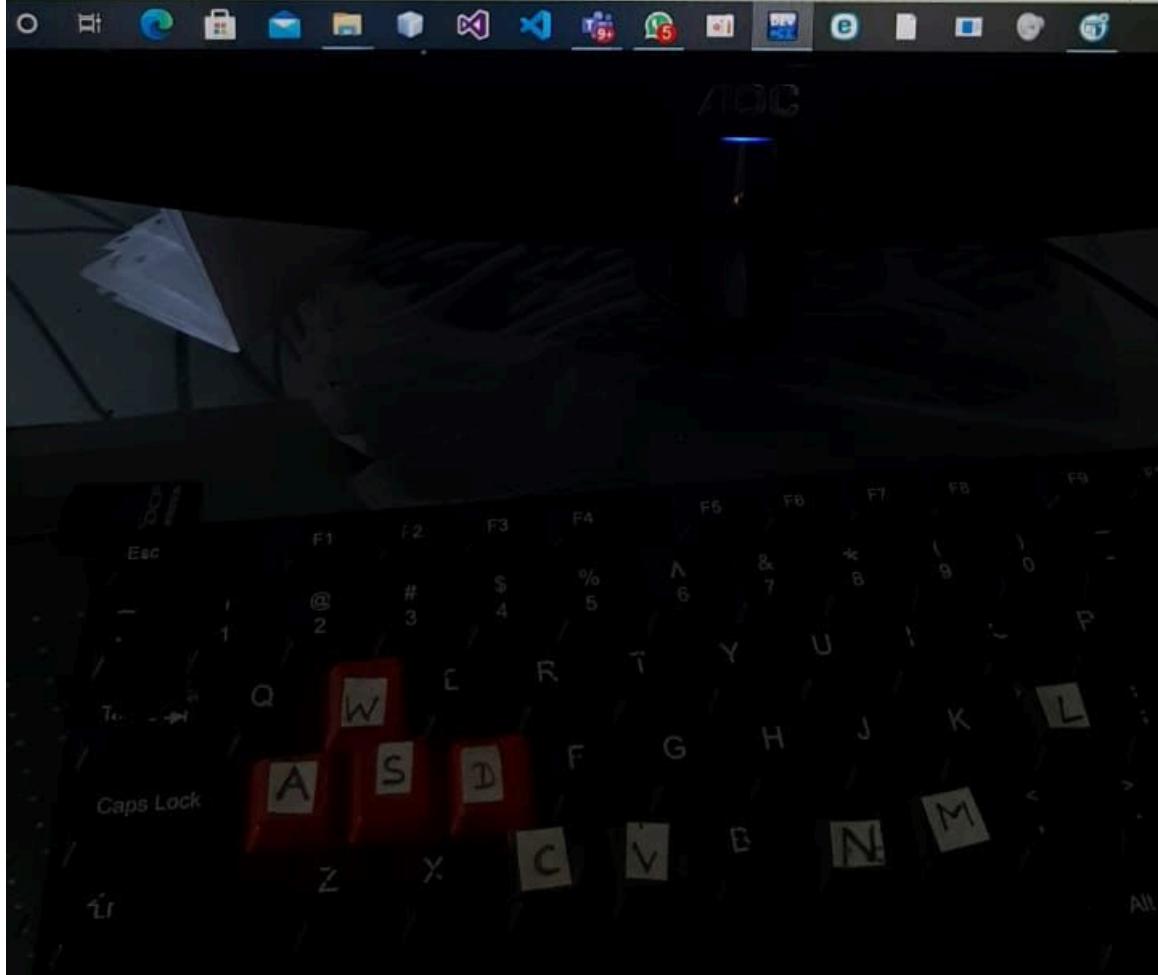
Write a C program to input the package no, food type and number of guests and calculate and display the total bill of the client. If the user enters an invalid package no or food type, the program should display an error message and terminate the program.

:

Bill amount = Package price + number of guests * food price per person

Sample output:

Package type: 1





The value of x can be calculated by using the following equation.

$$x = \frac{w}{(y^2 - 2yz)}$$

Write a C program to input the values of w,y and z from the keyboard calculate and display the value of x.

Sample input

If the following details are taken from the key board, z = 2, y = 5 and the program should display 2.2 as the value of x.

Marking Guide

Declaring meaningful variable names - 1 mark

Using correct data types for variables - 1 mark

Taking keyboard inputs - 1 mark

Correct equation - 3 mark

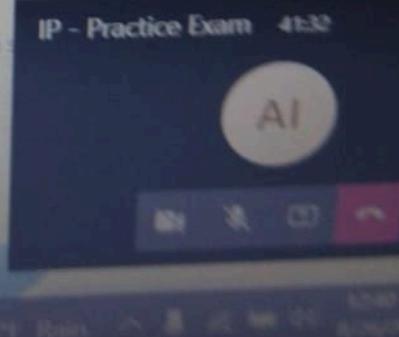
Display output correctly - 1 mark

Formatting of output - 0.5 mark

Coding standards - 1 mark

Correct compilation of program - 0.5 mark

Correct execution of the program - 1 mark

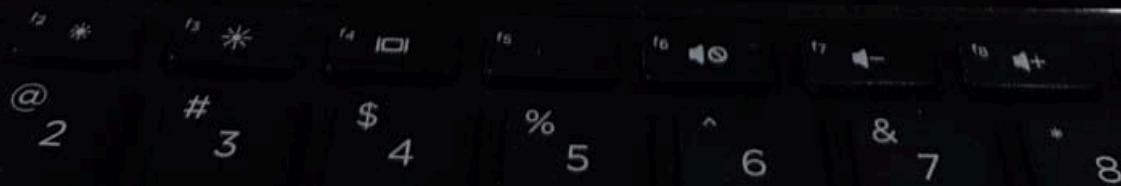




Answered
of 1
Question

Select one:

- a. Buffering
- b. Fetching
- c. Storing
- d. Decoding
- e. Executing



doodle

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Question 5

Not yet answered

Marked out of 1

Flag question

Select the simplified boolean expression of the function given by K-Map

	00	01	11	10
00	1	1	1	
01	X			
11	X			
10	1	1		X

Select one:

- a. $a'b' + b'd' + a'bd'$
- b. $a'b' + b'd' + a'd'$
- c. $b'd' + a'd'$
- d. $b'd' + a'bd'$
- e. $a'b' + b'd' + a'b'd'$

hp

Q W E R T Y U I

A S D F G H J

Z X C V B N



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d out of
g question

The value of q can be calculated by using the following equation.

$$q = \frac{m}{(4np - np^2)}$$

Write a C program to input the values of n, m and p from the keyboard and calculate and display the value of q.
Sample input

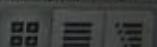
If m = 1.2, n = 2 and p = 3, the program should display 0.2 as the value of q.
Marking Guide

Declaring meaningful variable names - 1 mark
Using correct data types for variables - 1 mark
Taking keyboard inputs - 1 mark
Correct equation - 3 mark
Display output correctly - 1 mark
Formatting of output - 0.5 mark
Coding standards - 1 mark
Correct compilation of program - 0.5 mark
Correct execution of the program - 1 mark

Maximum size for new files: 30MB, maximum attachments: 1



▶ Files



Type here to search





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Q2

answered
1 out of 1
question

Write the simplified answer of the following K-M diagram

ab	00	01	11	10
cd	00	1	1	
	01	1	1	
	11	1		
	10	1		

Select one:

- a. $ab+b'c$
- b. $a'b+b'c'$
- c. $a'b+bc'$
- d. $a'b'+bc$
- e. $ab+bc'$



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Select the simplified expression for the function

y\z	00	01	11	10
00	0	1	1	0
01	x	0	0	1
11	x	0	0	1
10	0	1	1	x



Select one:

- a. $xz + y'z$
- b. $xz' + zx'$
- c. $xy + zx'$
- d. $x'y + zx'$



4

answered
out of 1
question

Select the correct simplification of the function given by the K-Map

wz \ yz	00	01	11	10
00	0	x	0	x
01	x	1	x	1
11	0	x	1	0
10	0	1	x	0



Select one:

- a. $X'Z+Y$
- b. $XZ+Y$
- c. $XY+Y'Z$
- d. $W'X+Y'Z+XY$
- e. $W'X+Y'Z$



Find the number of terms in the geometric progression

6, 12, 24, ..., 1536

$n =$

Find the 10th Element of the above sequence.

$a_{10} =$

Module

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yet answered

ed out of 1

Tag question

_____ register keeps tracks of the instructions stored in program stored in memory.

Select one:

- a. MBR (Memory Buffer Register)
- b. IR (Instruction Register)
- c. AC (Accumulator)
- d. MAR (Memory Address Register)
- e. PC (Program Counter)

hp

Question 5

Not yet answered

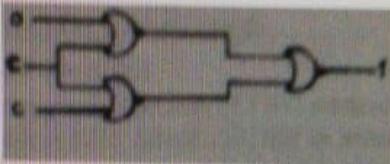
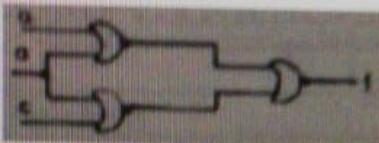
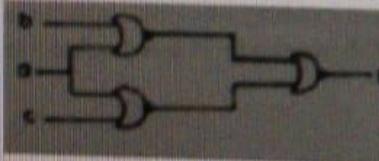
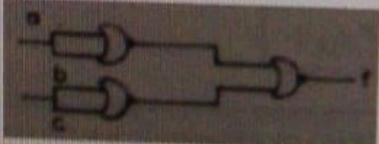
Marked out of 1

 Flag question

Select the correct implementation of the boolean function represented by the truth table.

	ab	00	01	11	10
c	0	0	0	1	1
b	0	0	1	1	1
a	0	1	1	1	0

Select one:

 a. b. c. d. e.

The screenshot shows a web browser window with a blue header bar. The header contains standard icons for closing, refreshing, and navigating. Below the header, the page has a dark blue header section with the SLIIT logo on the left and the text "NetExam" in large white letters, followed by "Sri Lanka Institute of Information Technology" in a smaller white font.

The main content area of the page displays a question:

Convert the number 300.75_{10} to the equivalent binary number.

Select one:

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

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ASCII code for character "d" is 100 (i.e. hundred). Character "d" is transmitted over a network. Parity scheme used by the sender is Odd Parity. Most Significant Bit (MSB) is used as the parity bit. What is the bit stream transmitted over the network?

Select one:

- a. 11101000
- b. 11010011
- c. 11010000
- d. 01100100
- e. 11010001

[Next page](#)

In a small village, there are 15 families, of which 10 families have at most 2 children. In a rural development programme 8 families are to be chosen for assistance, of which at least 6 families must have at most 2 children. In how many ways can the choice be made?

Answer :

Next page

≡ Q

Finish

Time l

1

9

17

25

2



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Find the value of the following definite integral.

$$\int_1^4 \frac{x^3 - 8}{\sqrt{x}} dx.$$

Select one:

- 139/7
- 150/8
- 142/7
- 144/7
- None of the above

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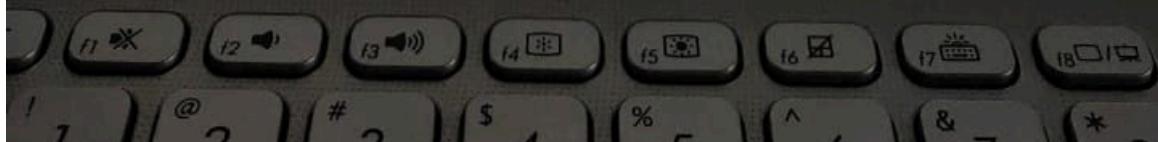
Differentiate,

$$\frac{d}{dx} [(\sqrt{x} - 3)(x^2 - 4x)]$$

Select one:

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

ASUS VivoBook



X

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Consider the following arithmetic sequence.

If, $a = 4$, $n = 30$, $d = 4$, Find :

$S_{30} = \boxed{}$

Find 40th element.

$a_{40} = \boxed{}$



Assume that you have to design a circuit for a light fixture controlled by two switches, where flipping one of the switches turns the light on when it is off and turns it off when it is on. Select the answer which gives the boolean expression for the above circuit.

Select one:

- $XY + \bar{X}.\bar{Y}$
- $X\bar{Y} + \bar{X}.Y$
- $\overline{XY} + X.Y$
- $\overline{XY} + \bar{X}.Y$
- None of the above



**Question 18**

Not yet answered

Marked out of
1.00

Flag question

A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected if the team has no girls.

Answer =

Quiz navigation

Finish attempt ...

Time left 0:22:33

1	2	3	4	5	6
8	9	10	11	12	13
15	16	17	18	19	
22	23	24	25	26	
29	30				

[Next page](#)



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Question 25

Not yet answered

Marked out of
4.00 Flag question

Consider the following arithmetic sequence.

If, $a = 4$, $n = 30$, $d = 4$, Find :

$$S_{30} = \boxed{\quad}$$



Find 40th element.

$$a_{40} = \boxed{\quad}$$



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A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected if the team has at least three boys.

Answer =

Finish attempt ...



on 21

not answered

d out of

g 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



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9

Answered
of
on

Convert the number 300.75_{10} to the equivalent binary number.

Select one:

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



Question 14

Not yet answered
Marked out of
0.00

Flag question

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