NetExam

Sri Lanka Institute of Information Technology

1

nswered

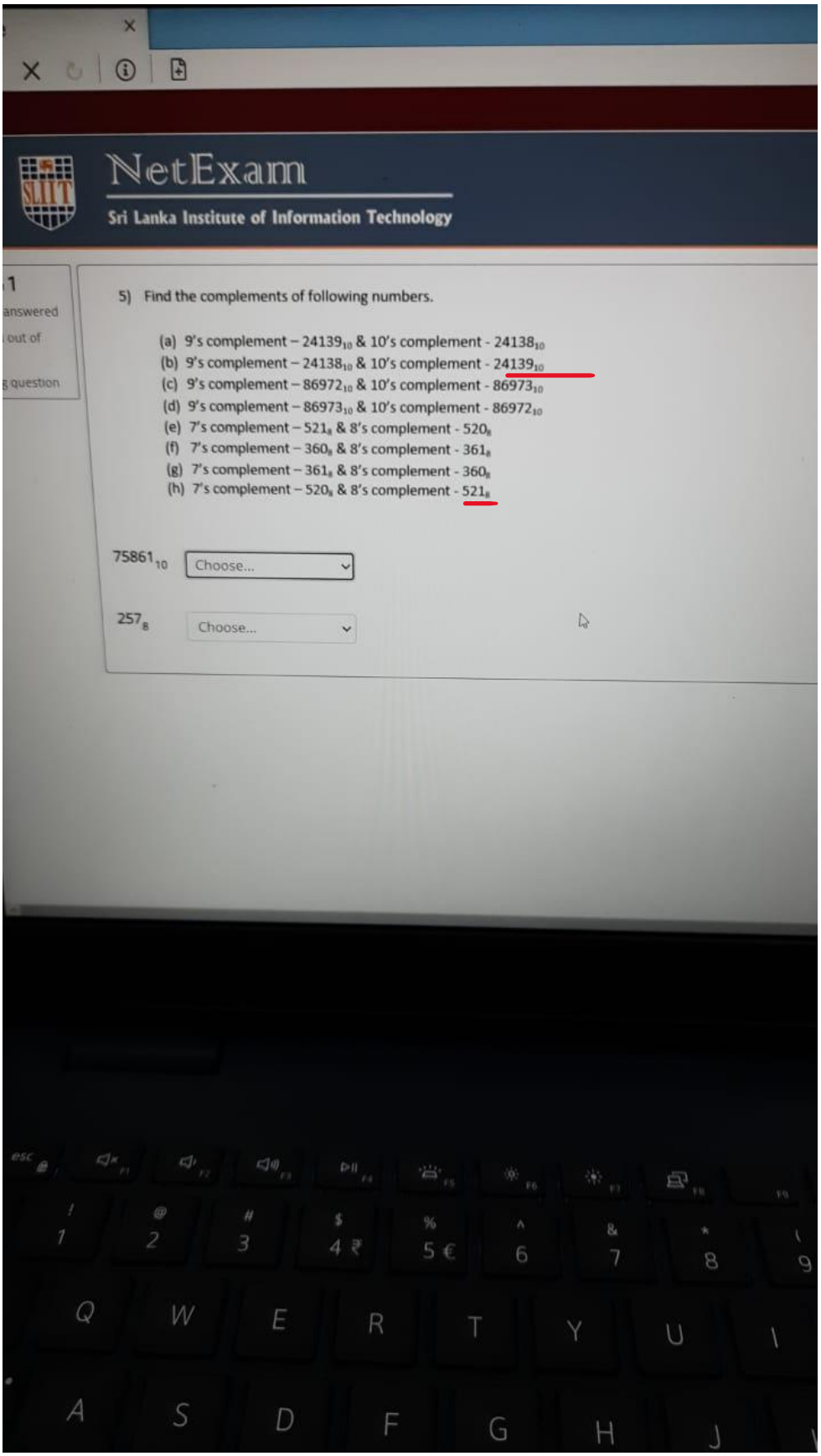
out of

question

$f(x) = 2(24 - 5x)^{1/2}$ is a function that is defined for $x \leq 24/5$. Find the inverse function.

Select one:

- $f^{-1}(x) = 12 - x^2/20$
- $f^{-1}(x) = 5/2 + x/4$
- $f^{-1}(x) = 24/5 + x^2/20$
- $f^{-1}(x) = 24/5 - x^2/20$
- None of the above


NetExam
Sri Lanka Institute of Information Technology
1
answered
out of
question
5) Find the complements of following numbers.
(a) 9's complement – 24139_{10} & 10's complement - 24138_{10}
(b) 9's complement – 24138_{10} & 10's complement - 24139_{10}
(c) 9's complement – 86972_{10} & 10's complement - 86973_{10}
(d) 9's complement – 86973_{10} & 10's complement - 86972_{10}
(e) 7's complement – 521_8 & 8's complement - 520_8
(f) 7's complement – 360_8 & 8's complement - 361_8
(g) 7's complement – 361_8 & 8's complement - 360_8
(h) 7's complement – 520_8 & 8's complement - 521_8
75861_{10} Choose...
257_8 Choose...

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) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.\bar{C}$

b) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.\bar{B}.\bar{C}$

c) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.C$

d) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + \bar{A}.B.\bar{C}$

e) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.B.\bar{C}$

f) $(A + \bar{B} + C).(\bar{A} + \bar{C} + B).(\bar{B} + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

g) $(A + \bar{B} + C).(\bar{A} + C + B).(B + \bar{C} + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

h) $(A + \bar{B} + C).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$

i) $(A + B + \bar{C}).(A + C + \bar{B}).(B + \bar{C} + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

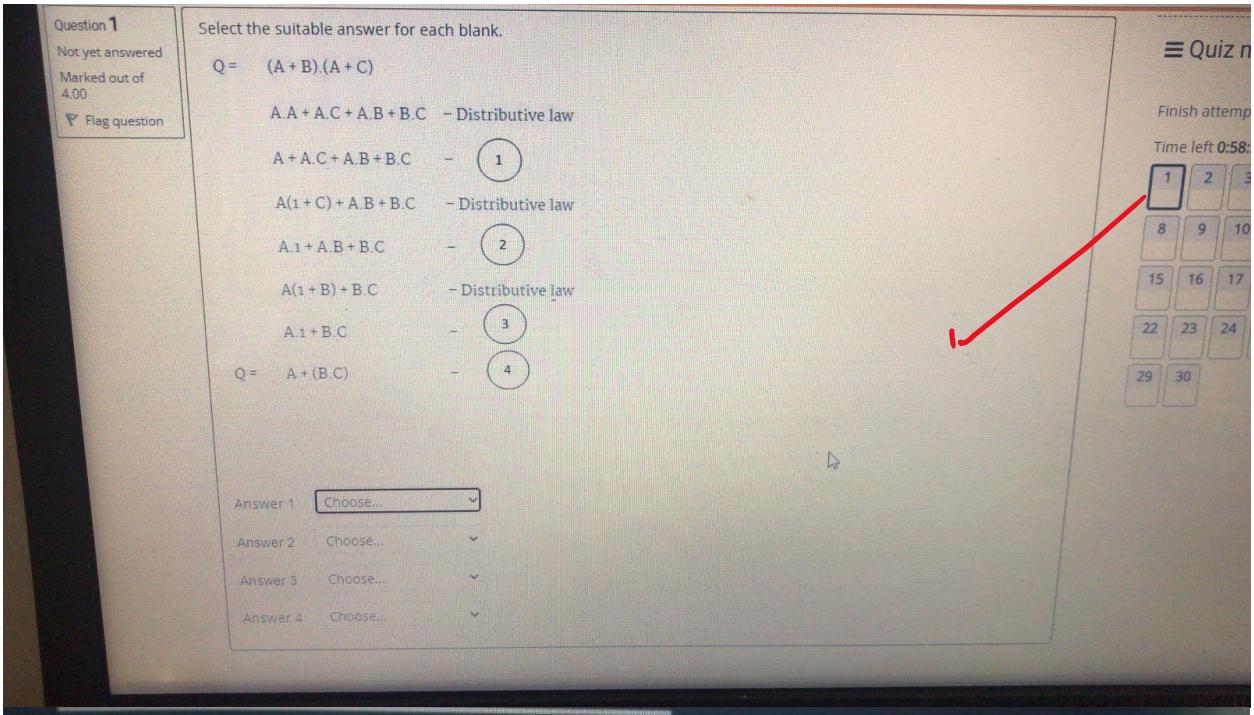
j) $(A + B + \bar{C}).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$

What is the SOP expression of the above truth table ?

What is the POS expression of the above truth table ?

Choose...

Choose...
(a)
(f)
None of the above
(c)
(b)
(e)
(d)
(i)
(h)
(g)
(j)



Sri Lanka Institute of Information Technology

$f(x) = 2(24 - 5x)^{1/2}$ is a function that is defined for $x \leq 24/5$. Find the inverse function

Select one:

- $f^{-1}(x) = 12 - x^2/20$
- $f^{-1}(x) = 5/2 + x/4$
- $f^{-1}(x) = 24/5 + x^2/20$
- $f^{-1}(x) = 24/5 - x^2/20$
- None of the above

Sri Lanka Institute of Information Technology

Find the answer for the following binary multiplication.

11100010 × 111

Select one:

- 11000101110
- 11111111001
- 10101100000
- 010010100110
- None of the above.

NetExam

Sri Lanka Institute of Information Technology

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

NetExam

Sri Lanka Institute of Information Technology

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

tion 2

yet answered

ked out of

Flag question

Find the dual of the following expression.

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

Select one:

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

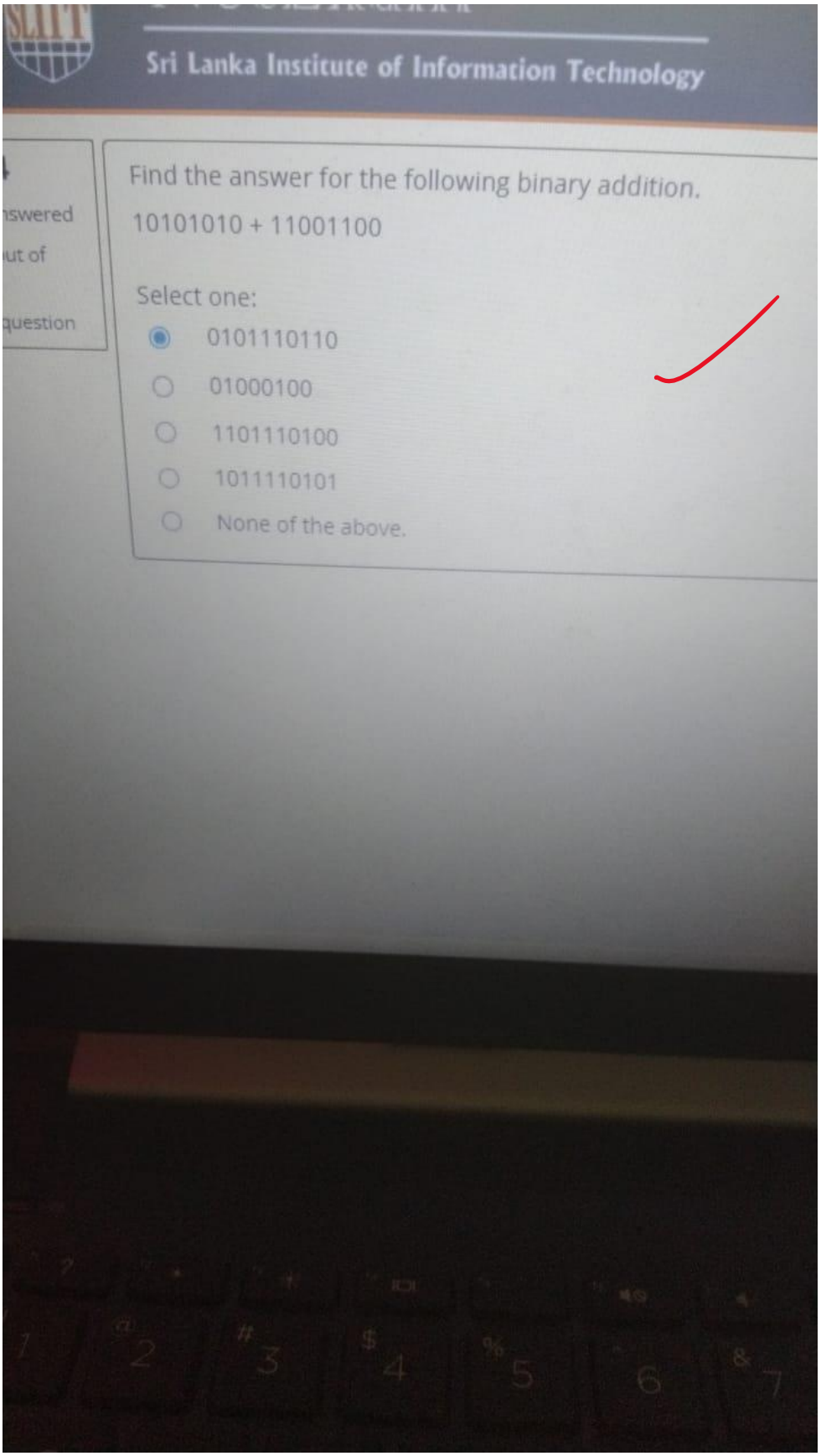
NetExam

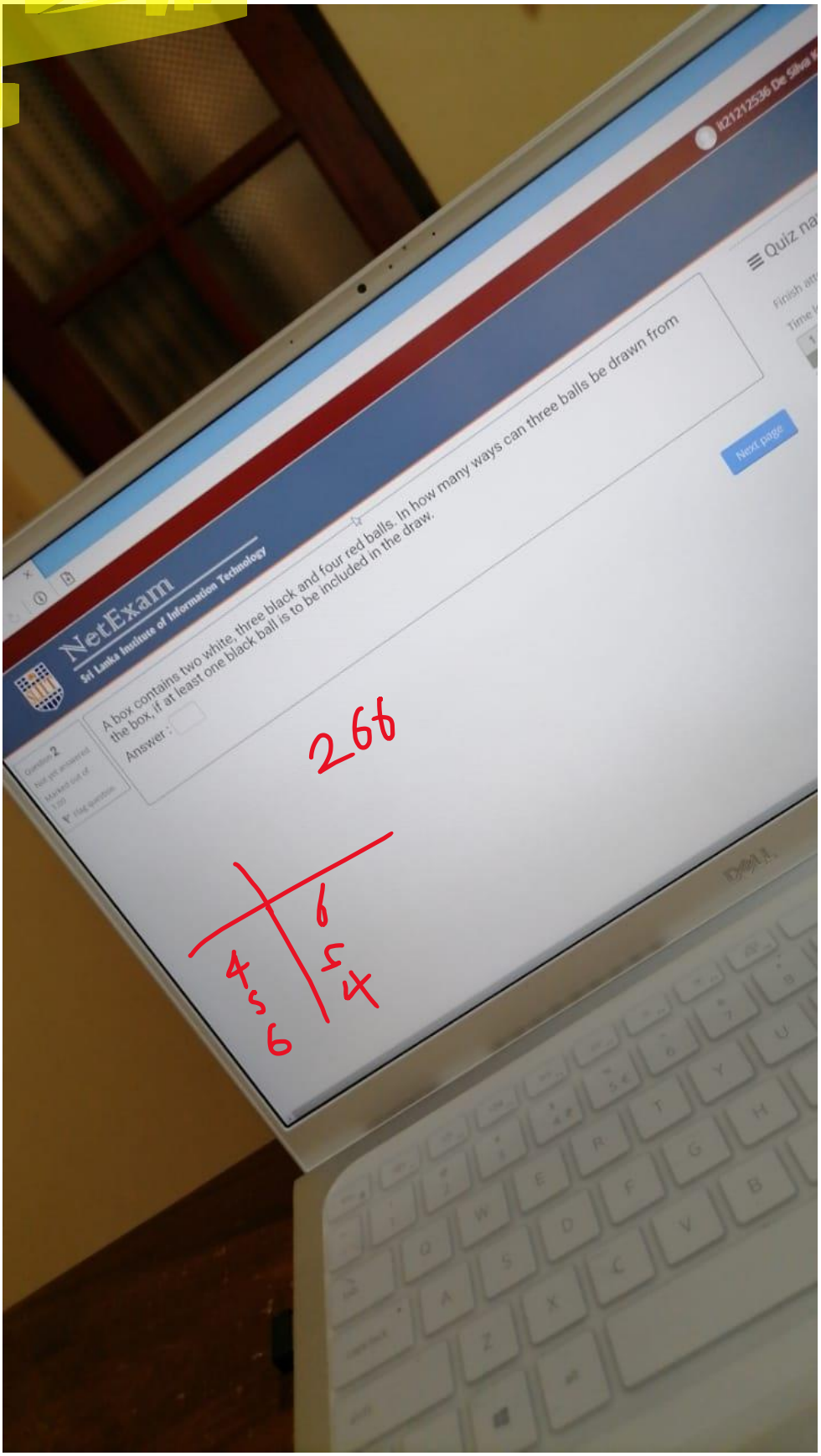
Sri Lanka Institute of Information Technology

Find the value of $\int_{\frac{3\pi}{2}}^{0} f(x)\,dx$, given that $\int_{0}^{\frac{3\pi}{2}} f(x)\,dx = \frac{21}{4}$.

Select one:

- -21/4
- 0
- 21/4
- 7
- None of the above.


Sri Lanka Institute of Information Technology
nswered
ut of
question
Find the answer for the following binary addition.
10101010 + 11001100
Select one:
0101110110
01000100
1101110100
1011110101
None of the above.


NetExam
Sri Lanka Institute of Information Technology
A box contains two white, three black and four red balls. In how many ways can three balls be drawn from the box, if at least one black ball is to be included in the draw.
Answer:
Next page
266
6
5
4
4
5
6

NetExam

Sri Lanka Institute of Information Technology

estion 5

t yet answered

arked out of
.00

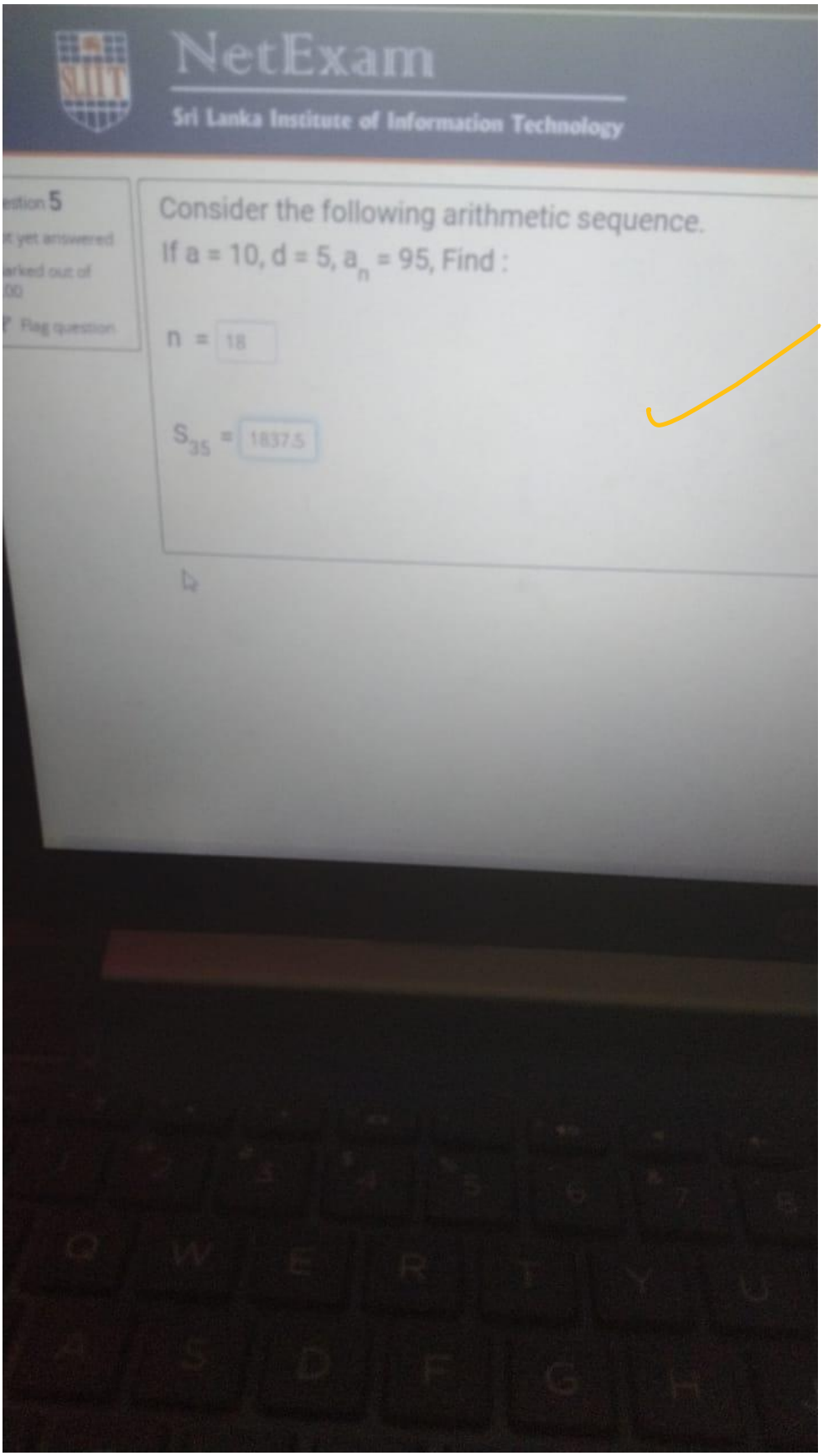
Flag question

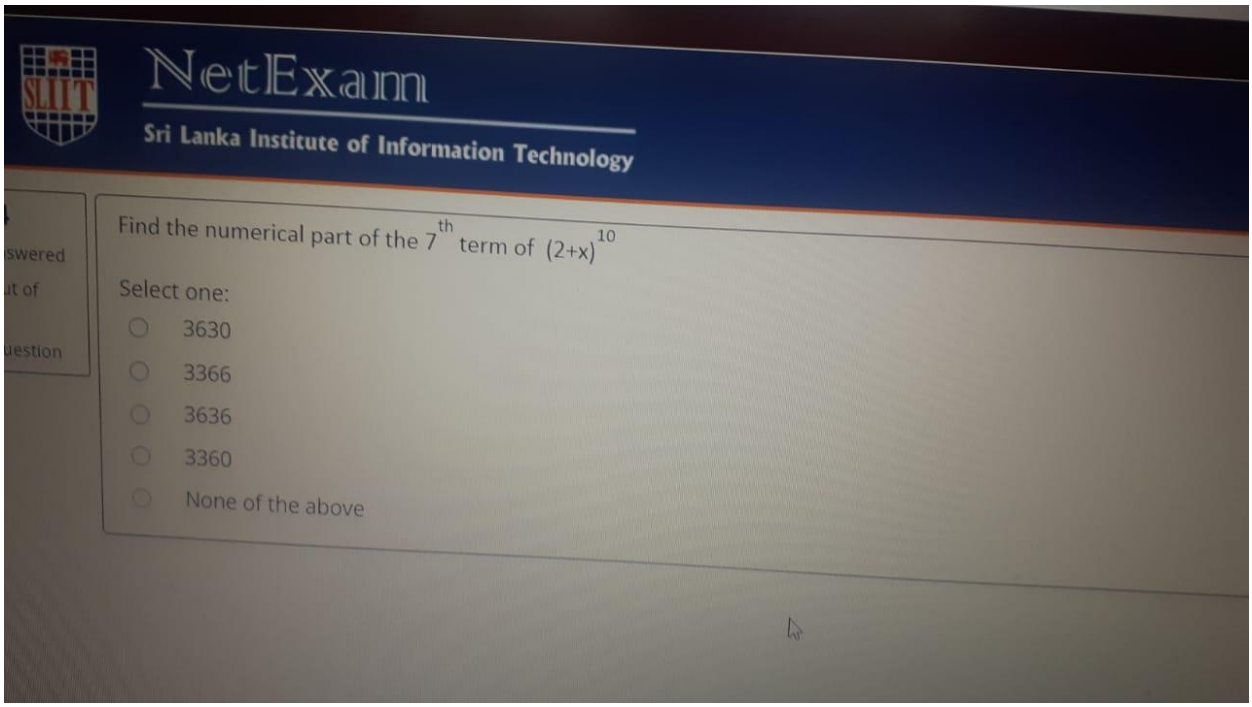
Consider the following arithmetic sequence.

If a = 10, d = 5, a_n = 95, Find :

n = 18

S_{35} = 1837.5


NetExam
Sri Lanka Institute of Information Technology
estion 5
t yet answered
arked out of
.00
Flag question
Consider the following arithmetic sequence.
If a = 10, d = 5, a_n = 95, Find :
n = 18
S_{35} = 1837.5



NetExam

SLUIT

Sri Lanka Institute of Information Technology

Find the numerical part of the 7th term of (2+x)

swered

at of

Select one:

3630

estion

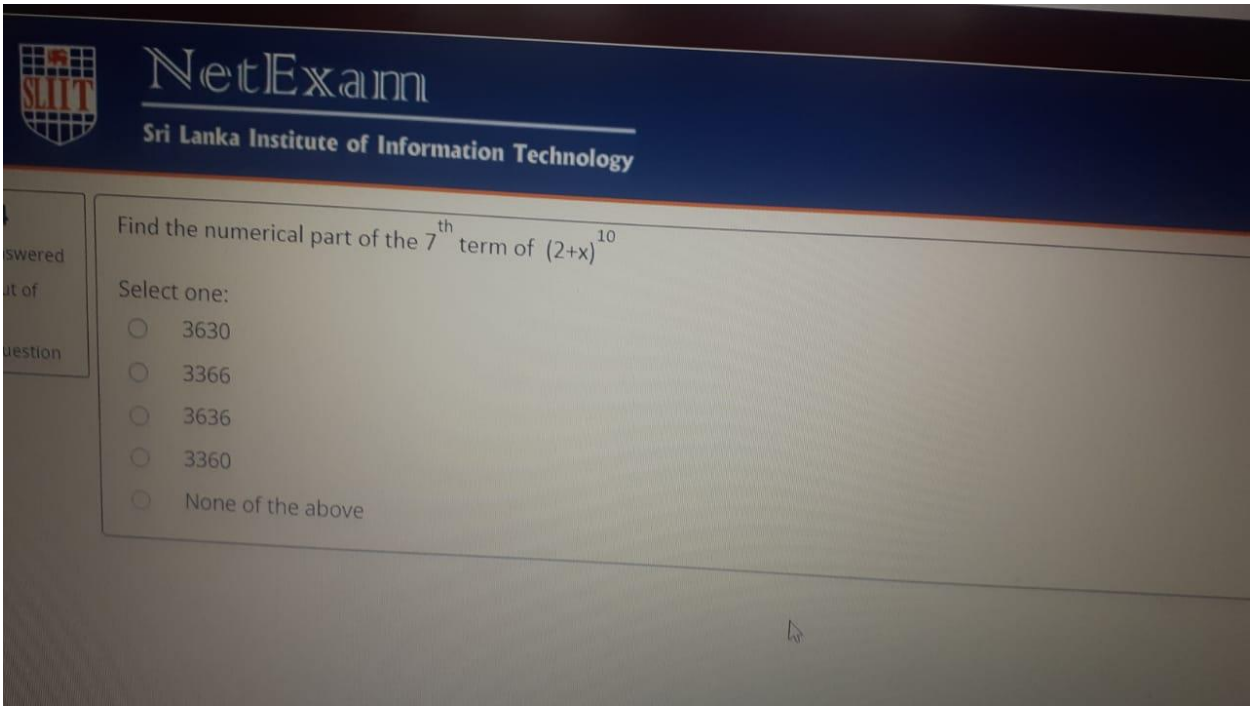
3366

3636

3360

0

None of the above


NetExam
Sri Lanka Institute of Information Technology
swered
ut of
uestion
Find the numerical part of the 7th term of (2+x)10
Select one:
3630
3366
3636
3360
None of the above

Differentiate following function with respect to x

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

Select one:

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

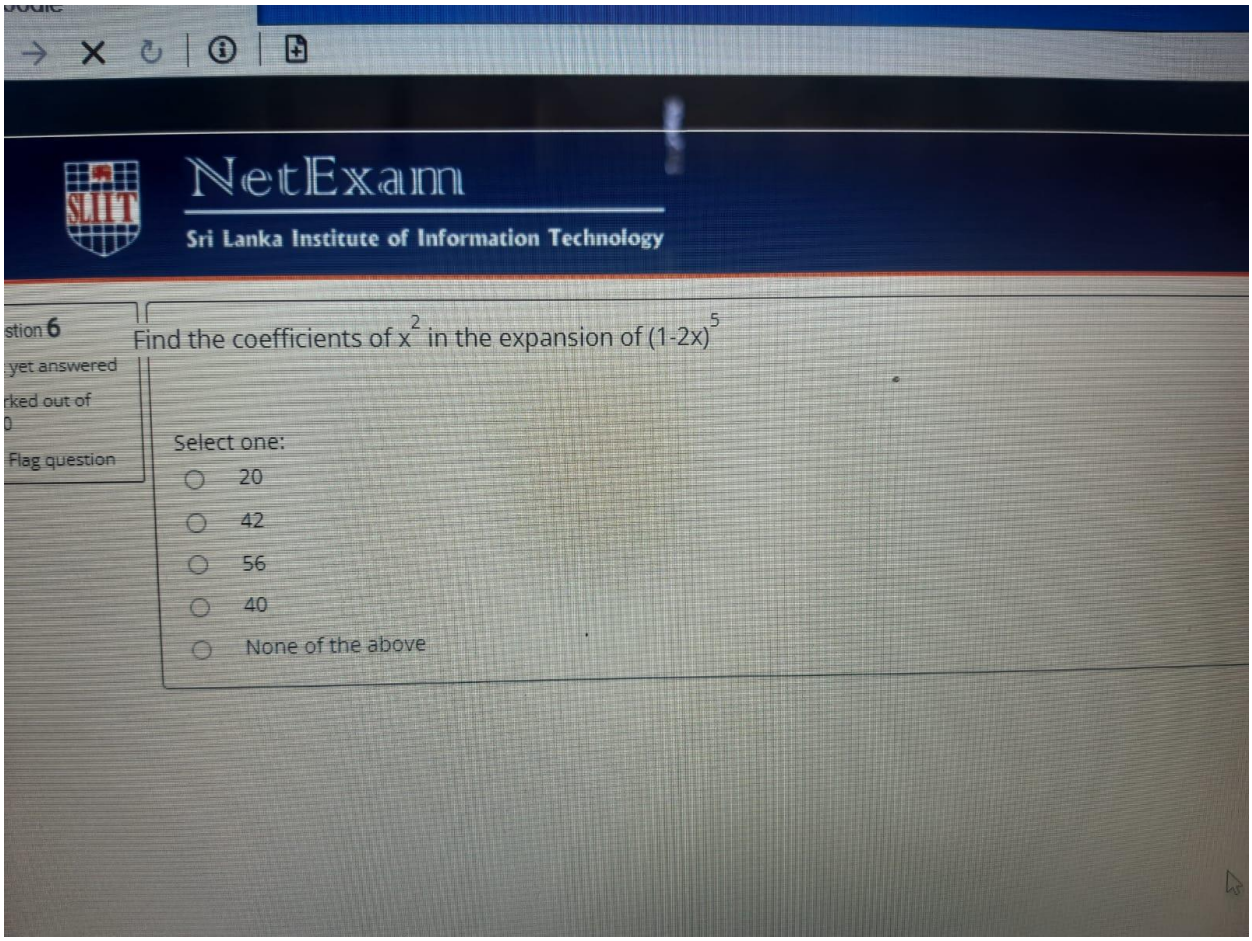
NetExam

Sri Lanka Institute of Information Technology

A committee of three individuals decides issues for an organization. Each individual v
proposal is passed if it receives at least two yes votes. Assume that you design a circuit
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



→ X el © | 6

NetExam

SLIIT

Sri Lanka Institute of Information Technology

stion 6

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

vet answered

ked out of

Select one:

Flag question

o

o 20

o o

NetExam

Sri Lanka Institute of Information Technology

stion 6

yet answered

rked out of

0

Flag question

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

Select one:

- 20
- 42
- 56
- 40
- None of the above

NetExam

Sri Lanka Institute of Information Technology

Question 5

Not yet answered

Marked out of

1.00

Flag question

A student has to answer 10 questions, choosing at least 4 from each of Parts A and B. If there are 6 questions in Part A and 7 questions in Part B, in how many ways can the student choose 10 questions?

Answer :

Next page

Quiz nav

Finish attempt

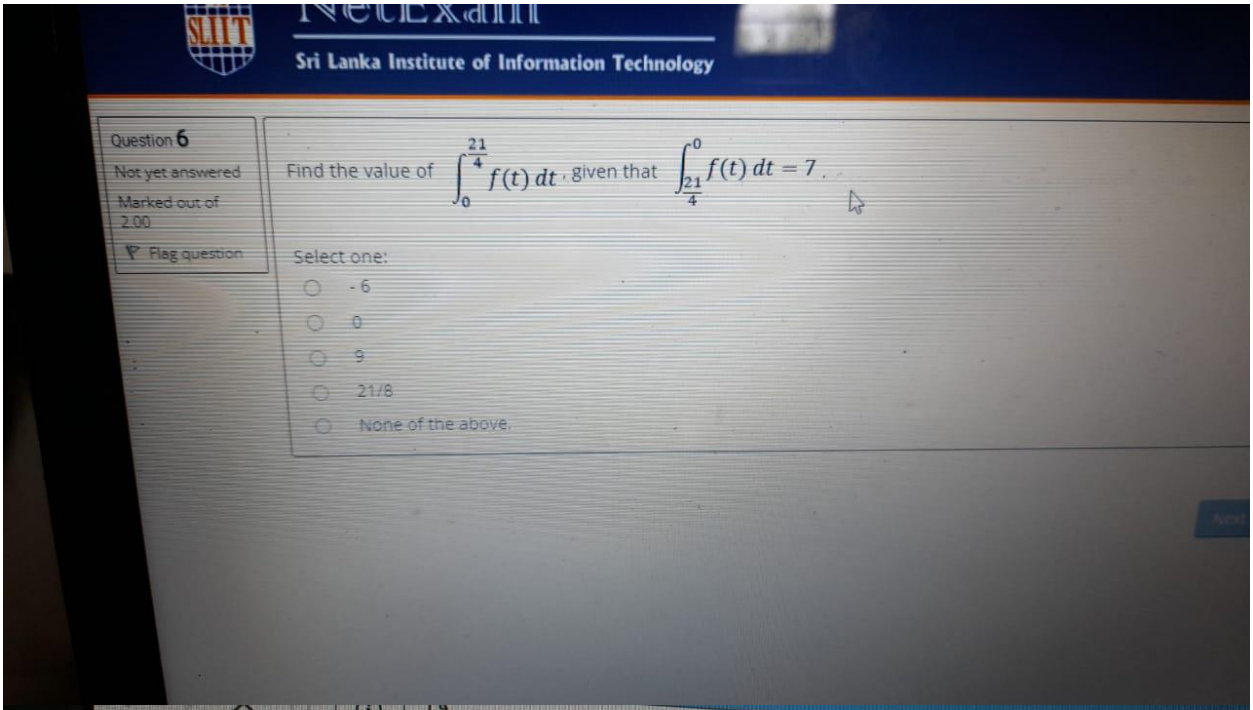
Time left 0:44:54

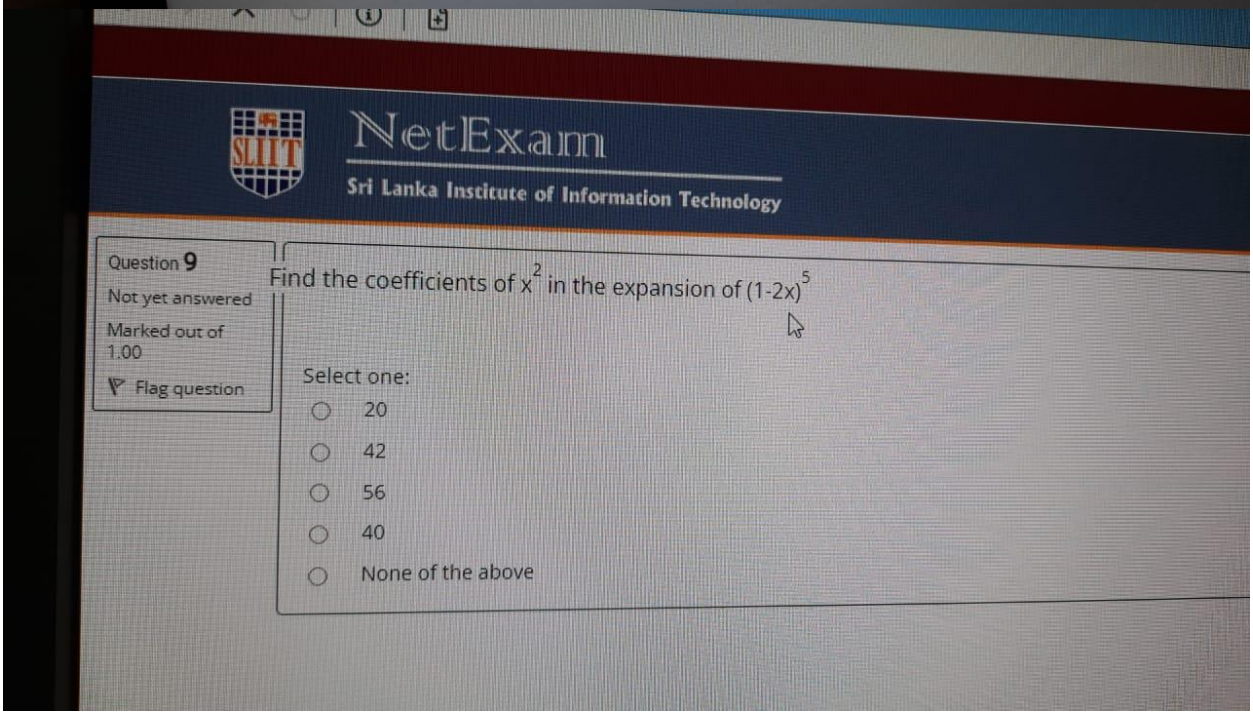
1 2 3

9 10 11

17 18 19

25 26 27


NetExam
Sri Lanka Institute of Information Technology
Question 6
Not yet answered
Marked out of 2.00
Flag question
Find the value of $\int_0^{\frac{21}{4}} f(t)\,dt$, given that $\int_{\frac{21}{4}}^{0} f(t)\,dt = 7$.
Select one:
-6
0
9
21/8
None of the above


NetExam
Sri Lanka Institute of Information Technology
Question 9
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
56
40
None of the above

Sri Lanka Institute of Information Technology

Convert the number 10222_4 to equivalent decimal numbers.

Select one:

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

NetExam

Sri Lanka Institute of Information Technology

it21258558

Eight chairs are numbered 1 to 8. Two women and 3 men wish to occupy one chair each. First the women choose the chairs from amongst the chairs 1 to 4 and then men select from the remaining chairs. Find the total number of possible arrangements.

Answer :

Next page

Quiz nav

Finish attempt ...

Time left 0:43:11

1 2 3

8 9 10

15 16 17

22 23 24

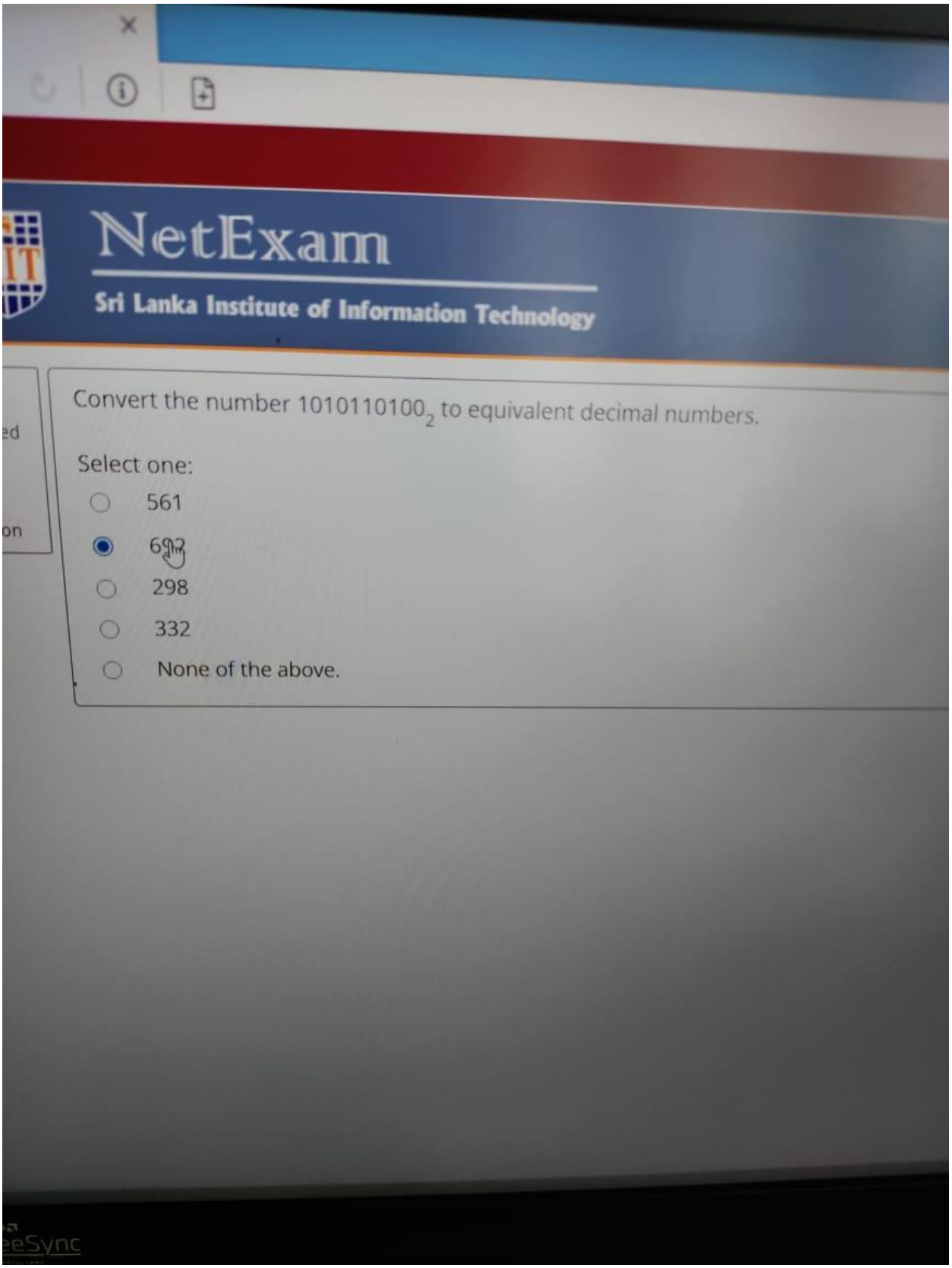
29 30

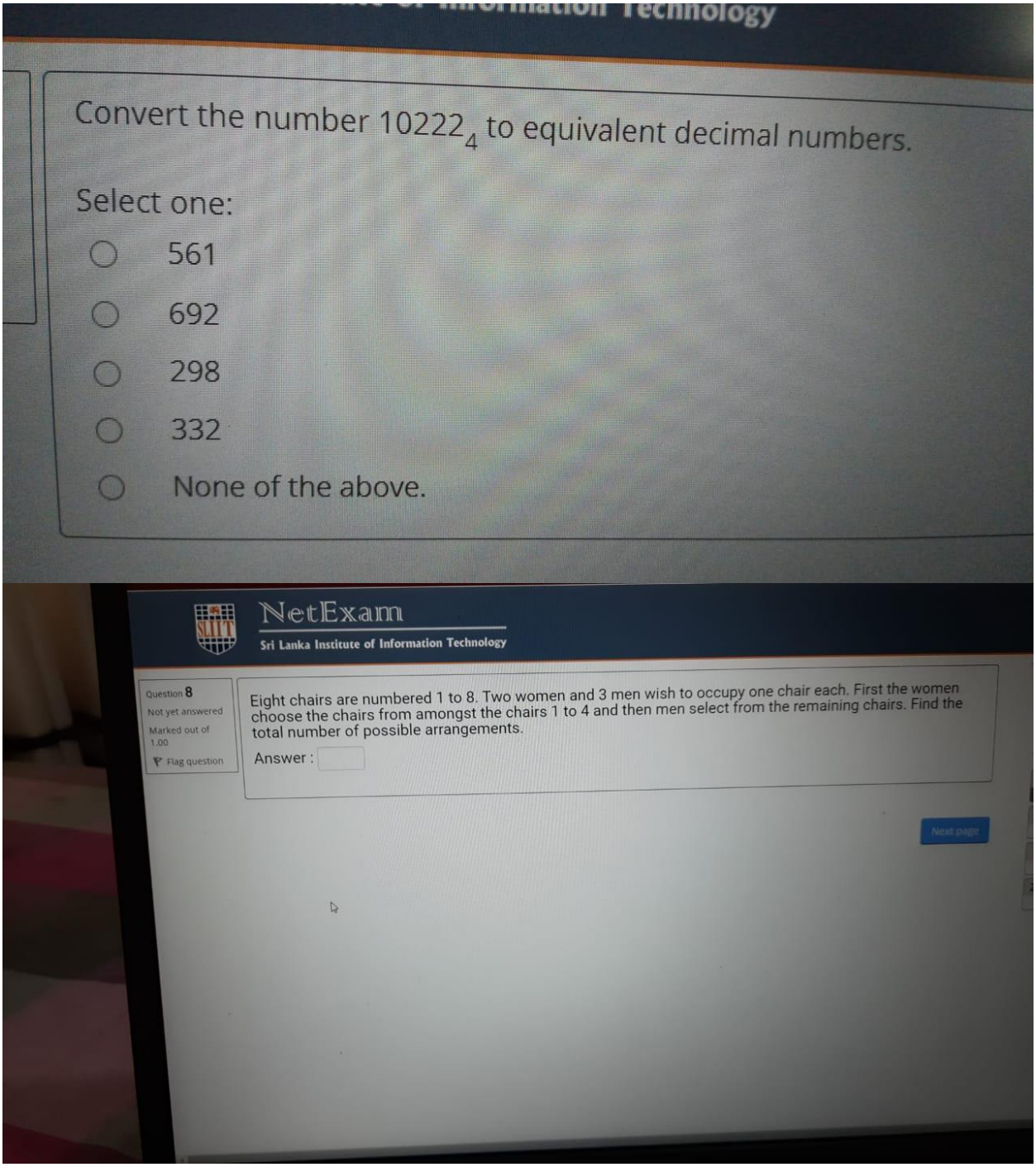
Sri Lanka Institute of Information Technology

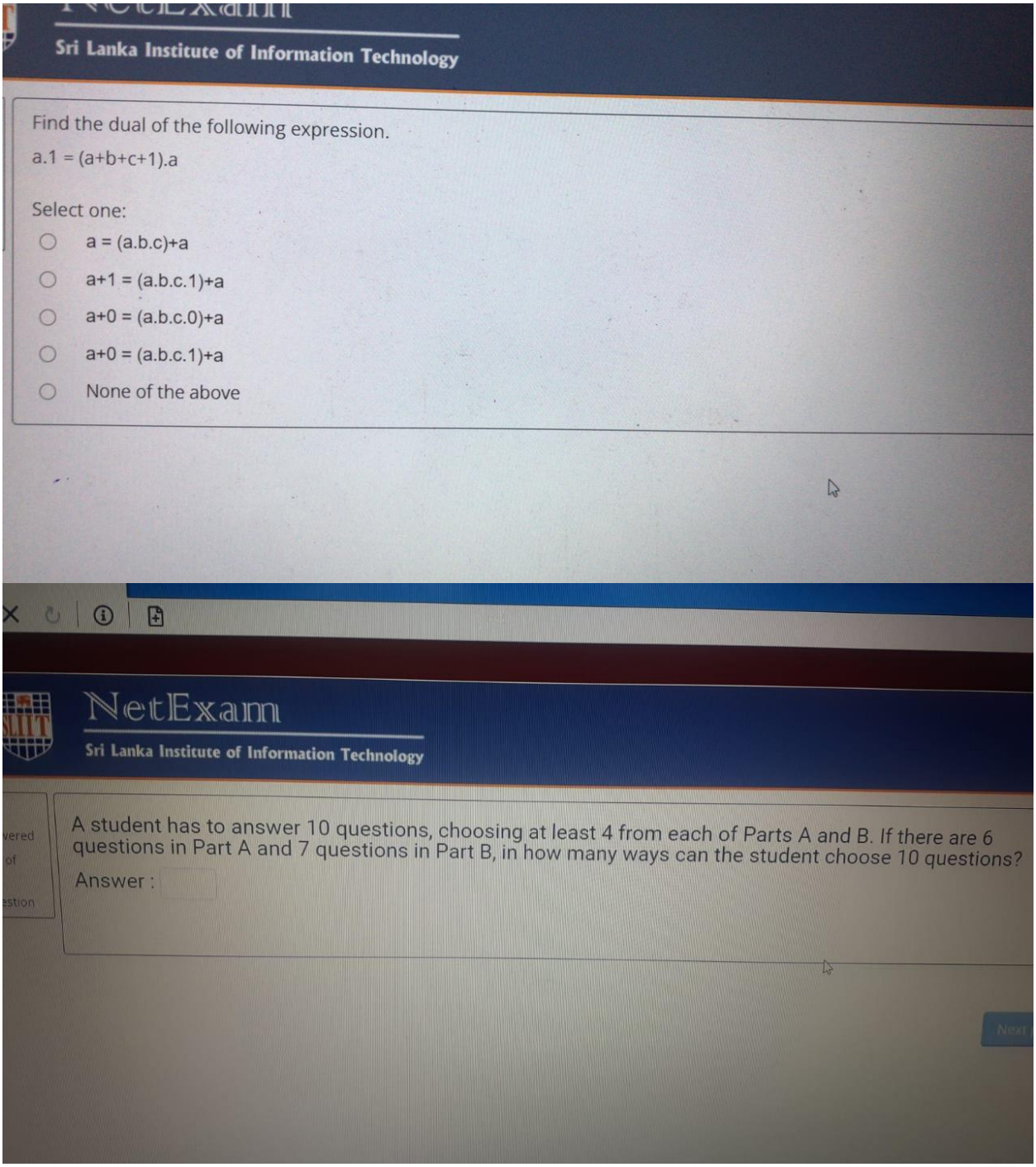
Convert the number 282_{11} to equivalent decimal numbers.

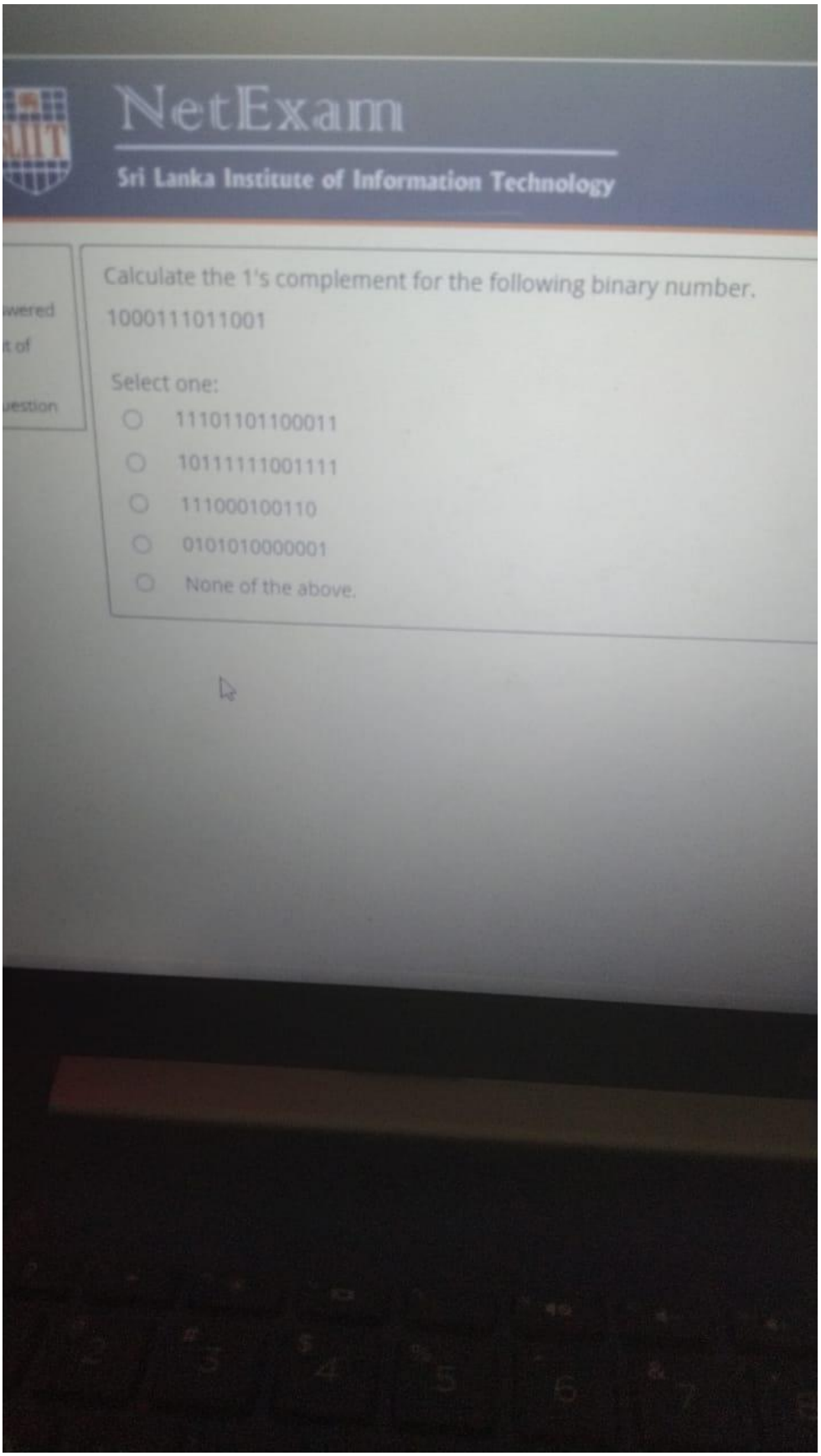
Select one:

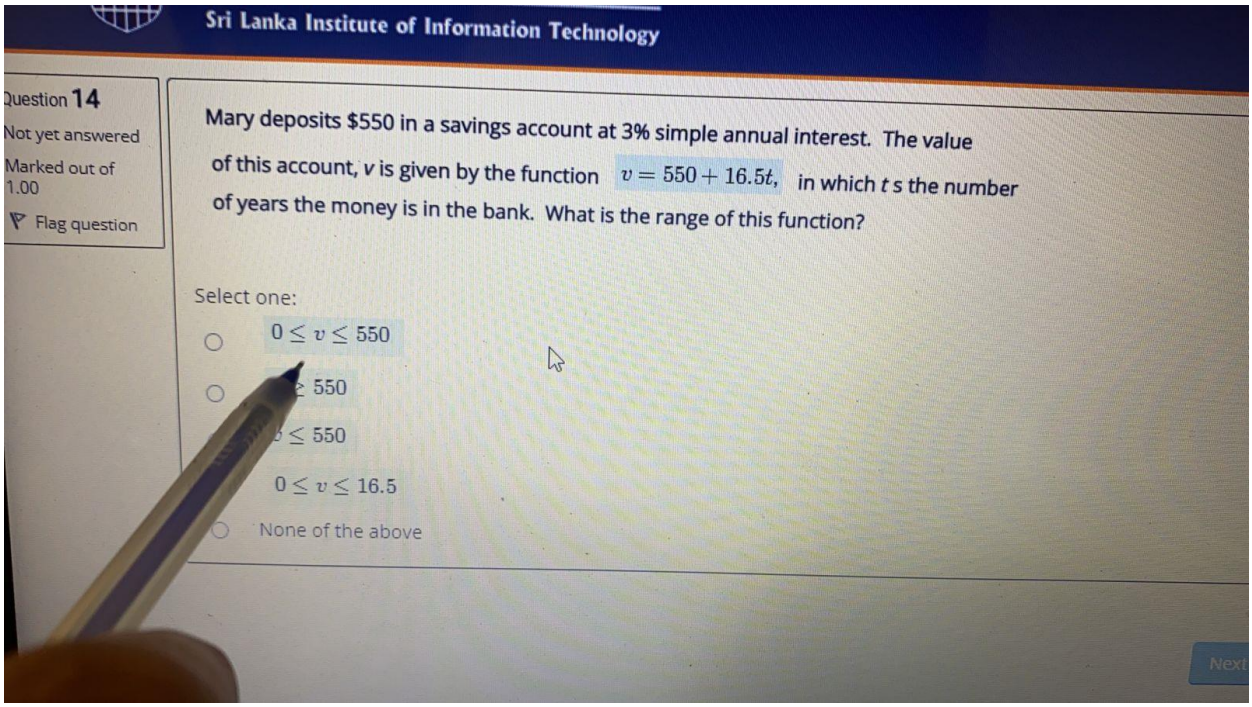
- 561
- 692
- 298
- 332
- None of the above.


NetExam
Sri Lanka Institute of Information Technology
Convert the number 1010110100_2 to equivalent decimal numbers.
Select one:
561
692
298
332
None of the above.


Technology
Convert the number 10222_4 to equivalent decimal numbers.
Select one:
561
692
298
332
None of the above.
NetExam
Sri Lanka Institute of Information Technology
Question 8
Not yet answered
Marked out of 1.00
Flag question
Eight chairs are numbered 1 to 8. Two women and 3 men wish to occupy one chair each. First the women choose the chairs from amongst the chairs 1 to 4 and then men select from the remaining chairs. Find the total number of possible arrangements.
Answer :
Next page


Sri Lanka Institute of Information Technology
Find the dual of the following expression.
a.1 = (a+b+c+1).a
Select one:
a = (a.b.c)+a
a+1 = (a.b.c.1)+a
a+0 = (a.b.c.0)+a
a+0 = (a.b.c.1)+a
None of the above
NetExam
Sri Lanka Institute of Information Technology
A student has to answer 10 questions, choosing at least 4 from each of Parts A and B. If there are 6 questions in Part A and 7 questions in Part B, in how many ways can the student choose 10 questions?
Answer :


NetExam
Sri Lanka Institute of Information Technology
Calculate the 1's complement for the following binary number.
1000111011001
Select one:
11101101100011
10111111001111
111000100110
0101010000001
None of the above.



Sri Lanka Institute of Information Technology

uestion 14

Mary deposits $550 in a savings account at 3% simple annual interest. The value

of this account, v is given by the function v= 550 + 16.5t, in which ts the number of years the money is in the bank. What is the range of this function?

Flag question

Select one:

o

05 x 550

0

550

Sri Lanka Institute of Information Technology

Question 14

Not yet answered

Marked out of 1.00

Flag question

Mary deposits $550 in a savings account at 3% simple annual interest. The value of this account, *v* is given by the function $v = 550 + 16.5t$, in which *t* s the number of years the money is in the bank. What is the range of this function?

Select one:

- $0 \leq v \leq 550$
- ≥ 550
- ≤ 550
- $0 \leq v \leq 16.5$
- None of the above

Next

NetExam

Sri Lanka Institute of Information Technology

oard Examinations Lockdown Browser Practice Test

ered

of

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 =

Next page

Moodle

NetExam

Sri Lanka Institute of Information Technology

Question 4

Not yet answered

Marked out of 1.00

Flag question

Convert the number 110111.0101_2 to the equivalent decimal number.

Select one:

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

AMD FreeSync Premium

NetExam

Sri Lanka Institute of Information Technology

Select the suitable answer for each blank.

proof:

$AB + A$

$AB + A1$ [_ 1 _]

$A(B + 1)$ [_ 2 _]

$A(1)$ [_ 3 _]

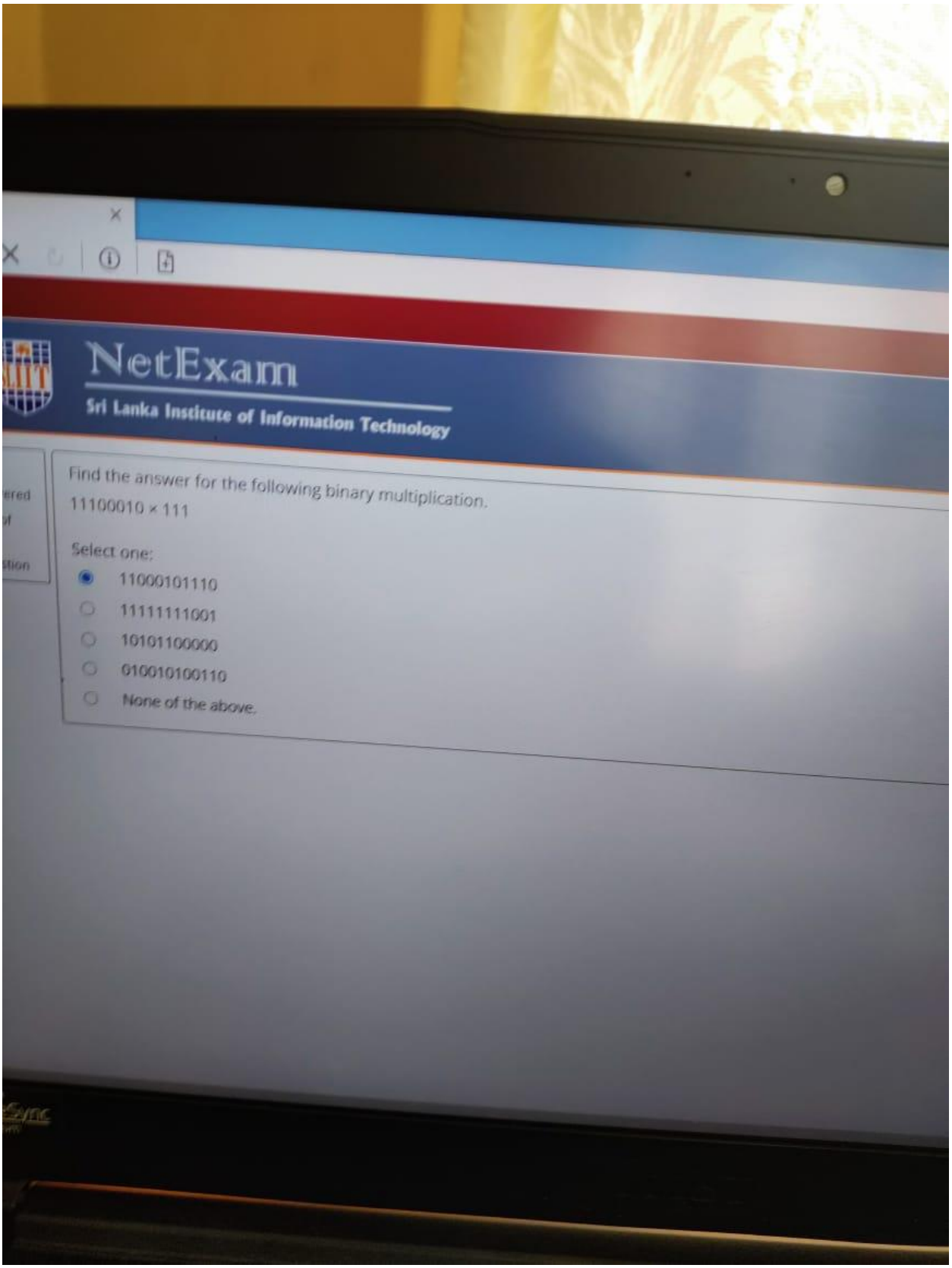
A [_ 4 _]

Answer 1: Identity Law

Answer 2: Distributive Law

Answer 3: Universal Bound Law

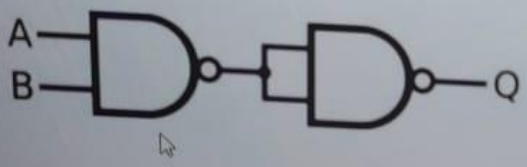
Answer 4: IdentityLaw


NetExam
Sri Lanka Institute of Information Technology
Find the answer for the following binary multiplication.
11100010 × 111
Select one:
11000101110
11111111001
10101100000
010010100110
None of the above.

NetExam

Sri Lanka Institute of Information Technology

ollowing circuit is equivalent to;



Select one:

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

NetExam

Sri Lanka Institute of Information Technology

swered

t of

uestion

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

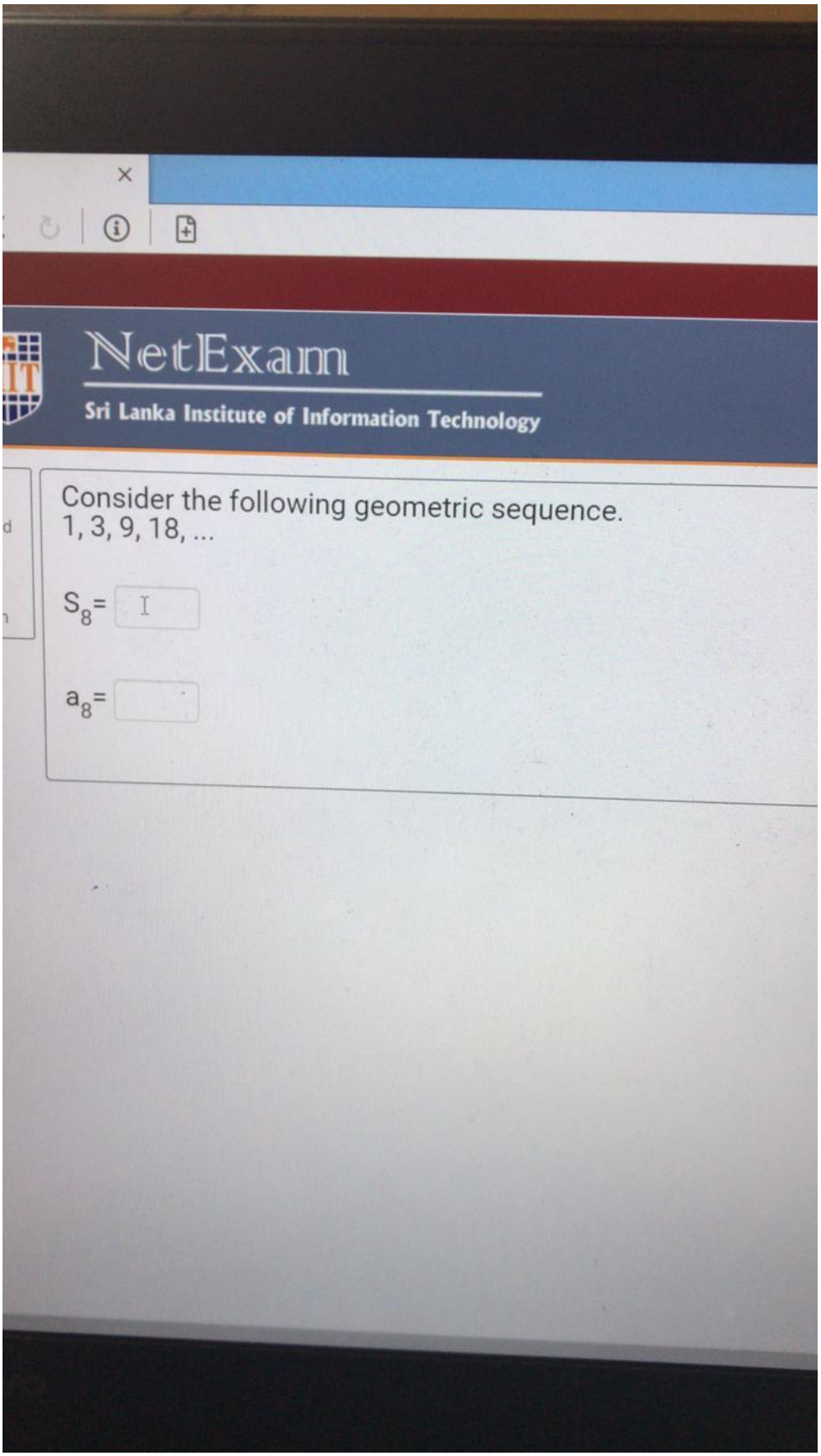
NetExam

Sri Lanka Institute of Information Technology

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

S_8=

a_8=


NetExam
Sri Lanka Institute of Information Technology
Consider the following geometric sequence.
1, 3, 9, 18, ...
S_8=
a_8=

NetExam

Sri Lanka Institute of Information Technology

Find,

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

Select one:

- $\frac{2\left(x^2+x+5\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+6\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+7\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+2\right)}{(2x+1)^2}$
- None of the above

NetExamn

Sri Lanka Institute of Information Technology

Calculate the following.

$^{10}C_5$ = 252

$^{10}P_5$ = 30240

Differentiate,

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

Select one:

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

Sri Lanka Institute of Information Technology

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) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.\bar{C}$

b) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.\bar{B}.\bar{C}$

c) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.C$

d) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + \bar{A}.B.\bar{C}$

e) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.B.\bar{C}$

f) $(A + \bar{B} + C).(\bar{A} + \bar{C} + B).(\bar{B} + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

g) $(A + \bar{B} + C).(\bar{A} + C + B).(B + \bar{C} + A).(\bar{A} + \bar{C} + \bar{B})$

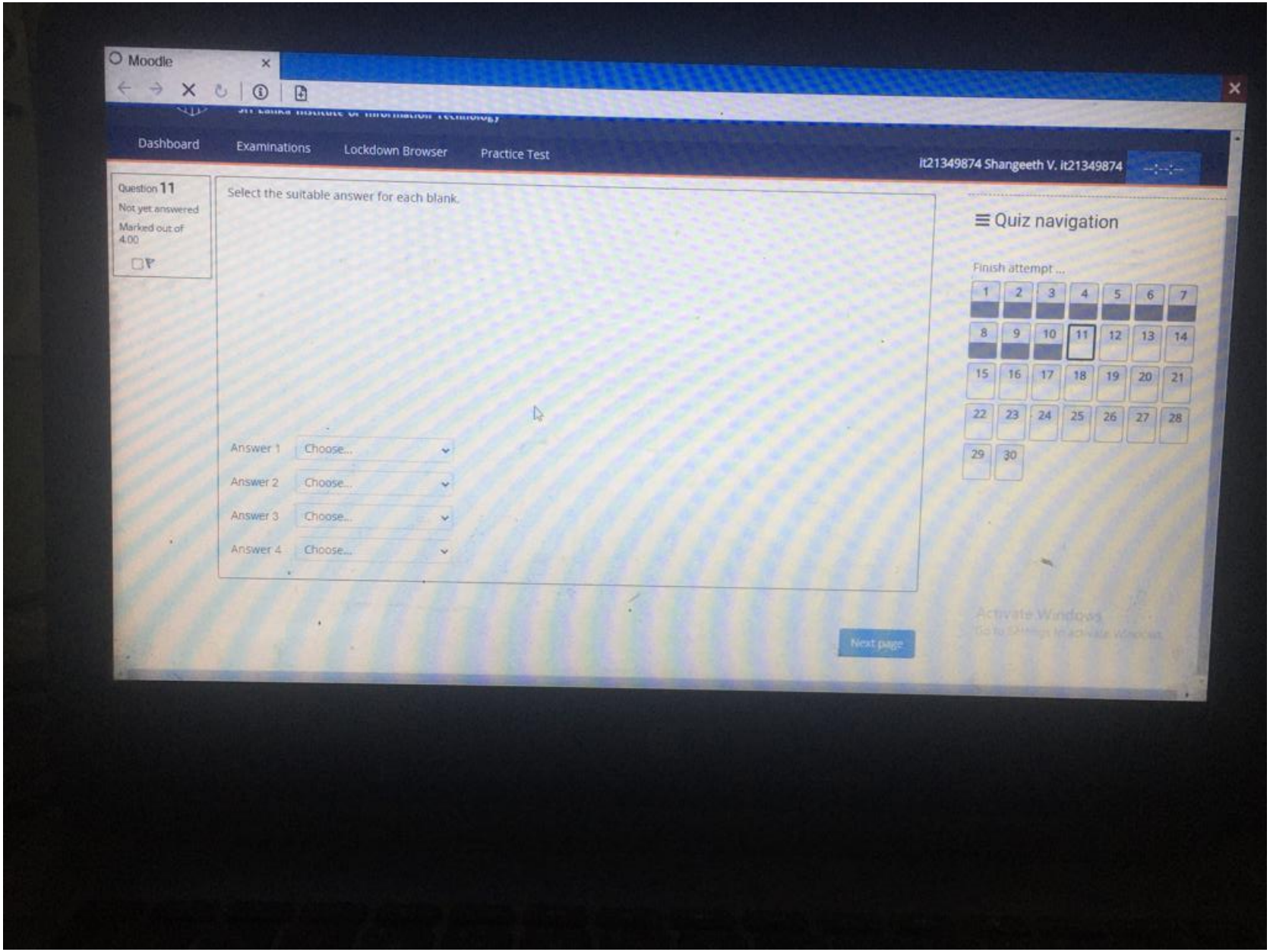
h) $(A + \bar{B} + C).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$

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 ? (e)

What is the POS expression of the above truth table ? (f)


Moodle
Dashboard
Examinations
Lockdown Browser
Practice Test
it21349874 Shangeeth V. it21349874
Question 11
Not yet answered
Marked out of 4.00
Select the suitable answer for each blank.
Answer 1 Choose...
Answer 2 Choose...
Answer 3 Choose...
Answer 4 Choose...
Next page
Quiz navigation
Finish attempt ...
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30

NetExam

Sri Lanka Institute of Information Technology

1) Find the answers for the following binary addition and subtraction.

(a) 100100_2
(b) 1000110_2
(c) 1010110_2
(d) 1010111_2
(e) 1010100_2
(f) 1001100_2
(g) 1001010_2
(h) 1101100_2

$11101_2 + 111001_2$ (c)

$1101011_2 - 11111_2$ (f)

NetExam

Sri Lanka Institute of Information Technology

Differentiate with respect to x,

$$\left(x^3-1\right)^2-x^6+\sqrt{x}-1$$

Select one:

- $-\frac{12x^{\frac{11}{2}}+12x^{\frac{5}{2}}-1}{2\sqrt{x}}$
- $-\frac{12x^{\frac{5}{2}}-1}{2\sqrt{x}}$
- $-\frac{12x^{\frac{7}{2}}+1}{2x^{\frac{3}{2}}}$
- $-7x^6+6x^2\left(x^3-1\right)-\frac{1}{2x^{\frac{3}{2}}}$
- None of the above

Sri Lanka Institute of Information Technology

Select the Correct Answer.

A variant of idempotent Law is, Choose...

A Variant of Identity Law is, Choose...

A Variant of Absorption Law is, Choose...

Choose...
A + A = 0
A.0 = A
B.B = 1
A.(A + C) = A
(A + A) = A
A . 1 = A

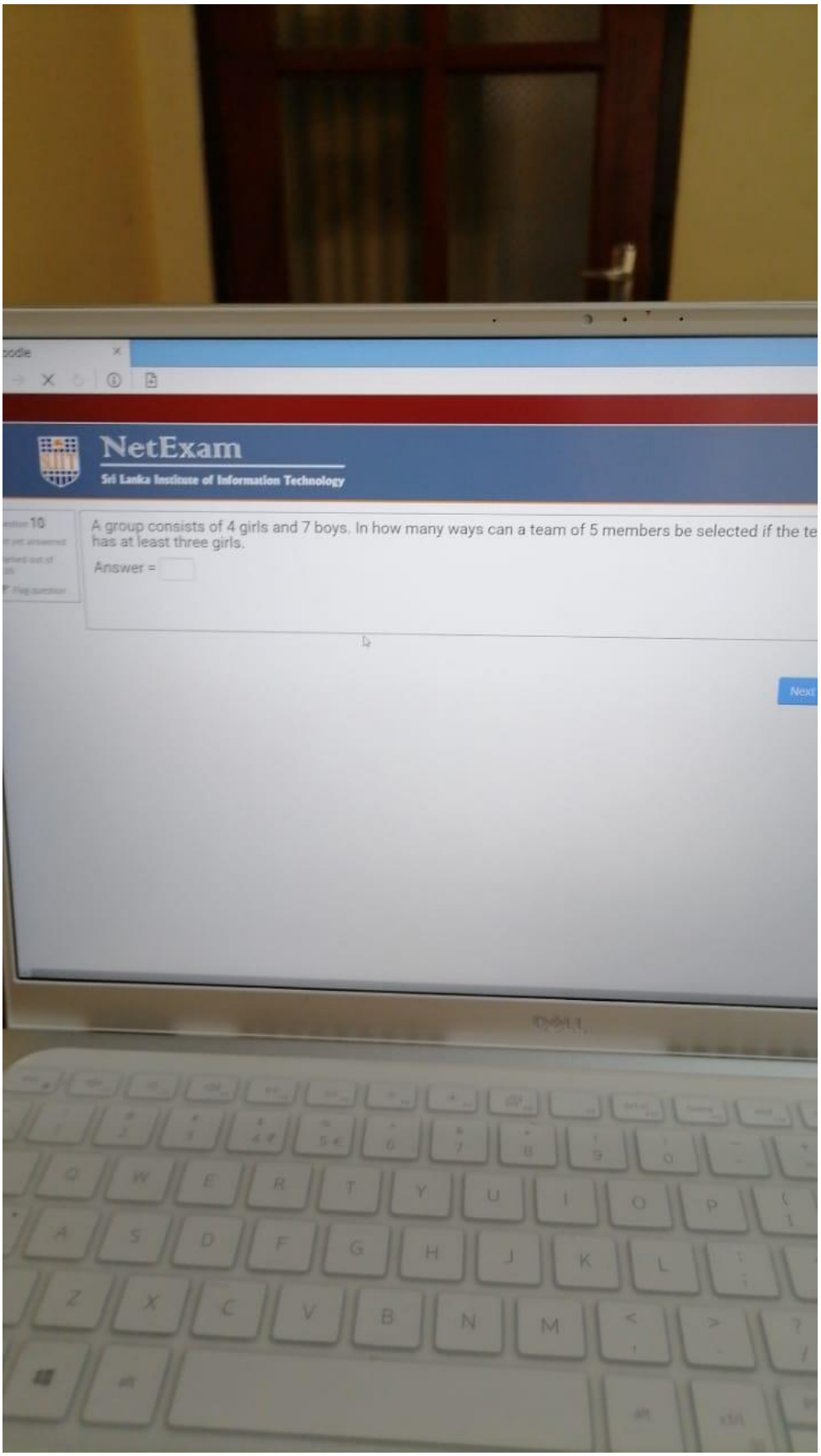
NetExam

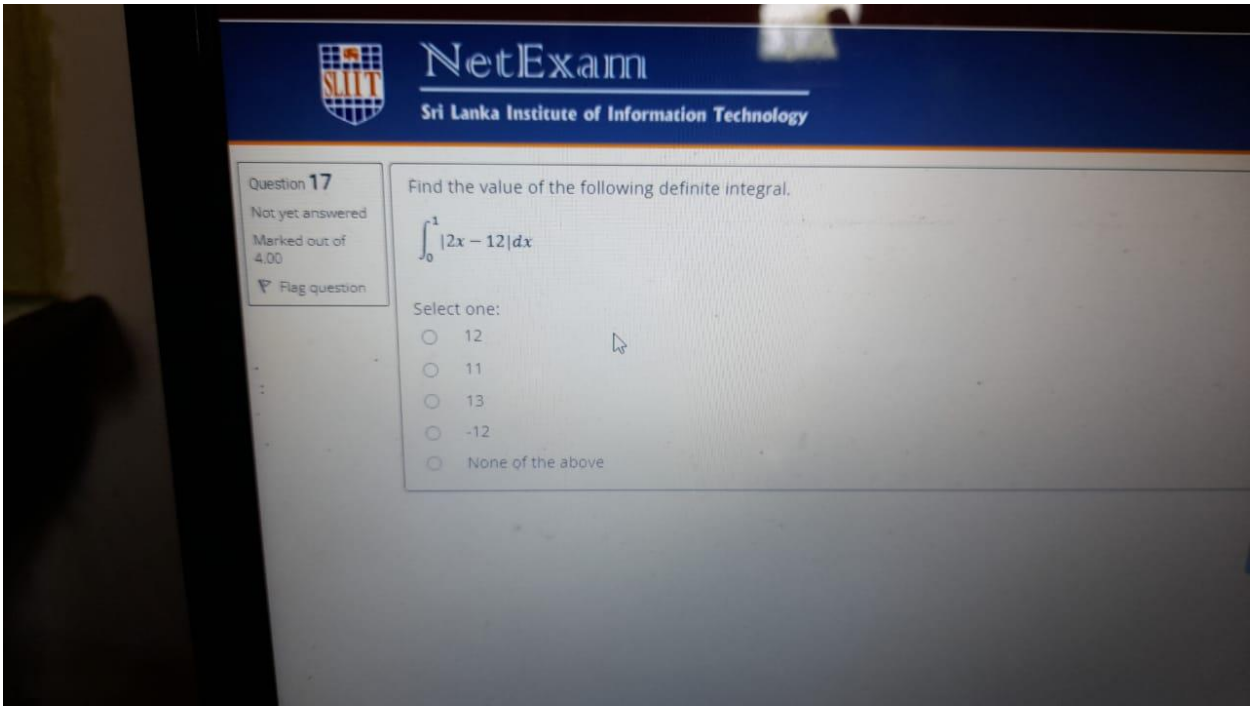
Sri Lanka Institute of Information Technology

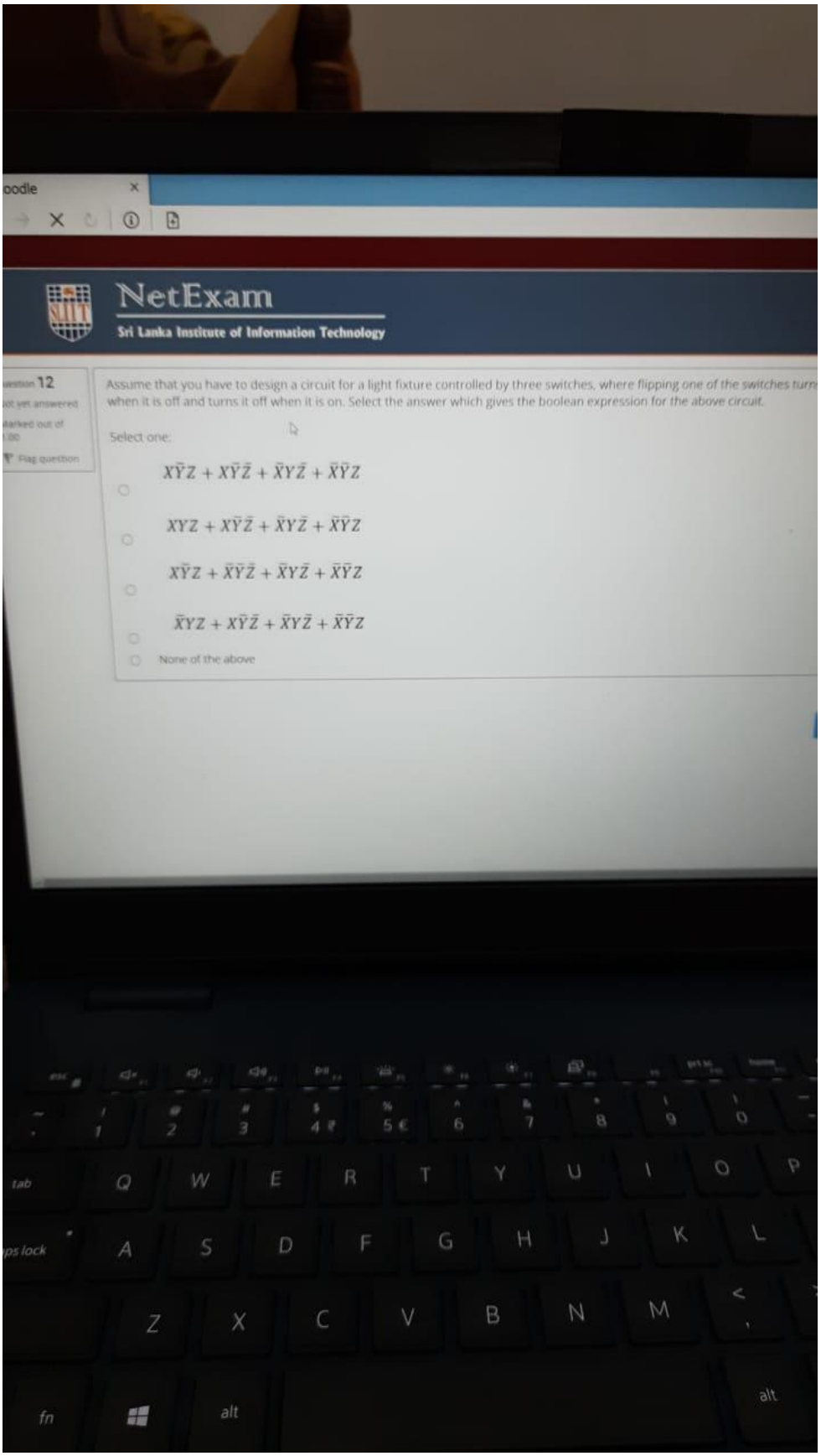
Examinations | Lockdown Browser | Practice Test

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

Answer =


NetExam
Sri Lanka Institute of Information Technology
A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be selected if the te
has at least three girls.
Answer =
Next
DELL


NetExam
Sri Lanka Institute of Information Technology
Question 17
Not yet answered
Marked out of 4.00
Flag question
Find the value of the following definite integral.
$\int_0^1 |2x - 12| dx$
Select one:
12
11
13
-12
None of the above


NetExam
Sri Lanka Institute of Information Technology
Assume that you have to design a circuit for a light fixture controlled by three switches, where flipping one of the switches turns
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:
$X\bar{Y}Z + X\bar{Y}\bar{Z} + \bar{X}YZ + \bar{X}\bar{Y}Z$
$XYZ + X\bar{Y}\bar{Z} + \bar{X}Y\bar{Z} + \bar{X}\bar{Y}Z$
$X\bar{Y}Z + \bar{X}\bar{Y}\bar{Z} + \bar{X}YZ + \bar{X}\bar{Y}Z$
$\bar{X}YZ + X\bar{Y}\bar{Z} + \bar{X}Y\bar{Z} + \bar{X}\bar{Y}Z$
None of the above

NetExam

Sri Lanka Institute of Information Technology

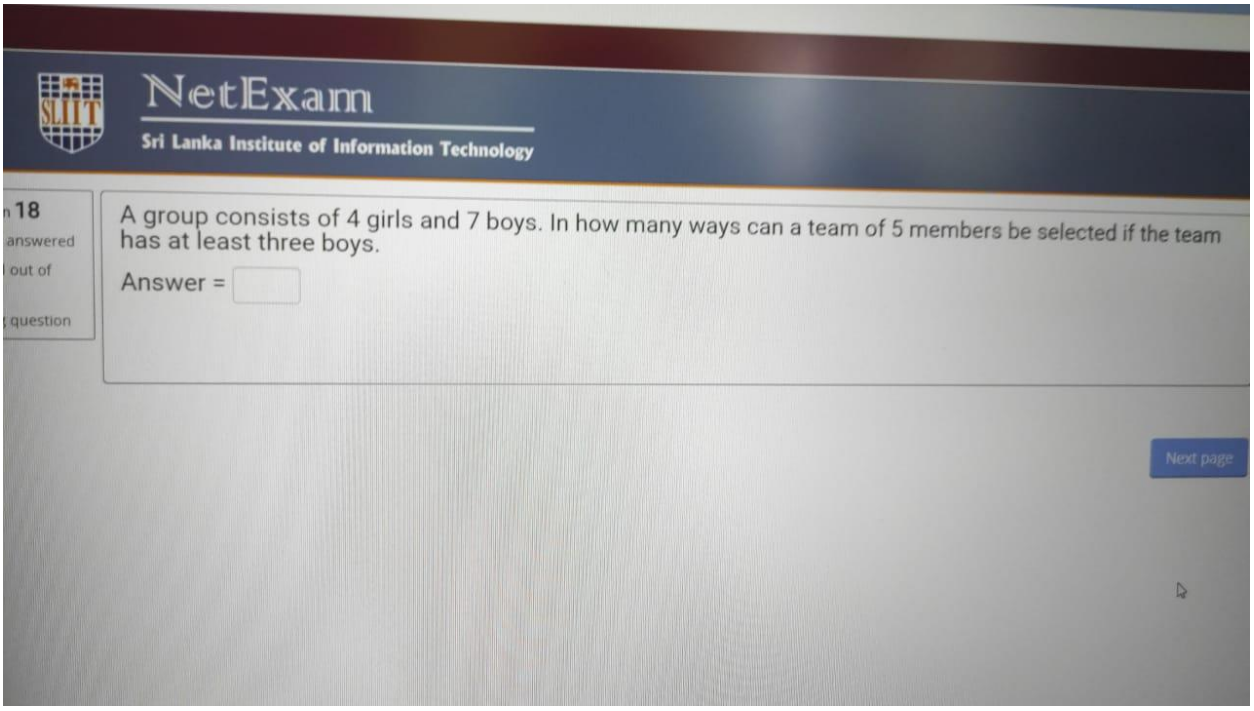
Consider the following arithmetic sequence.

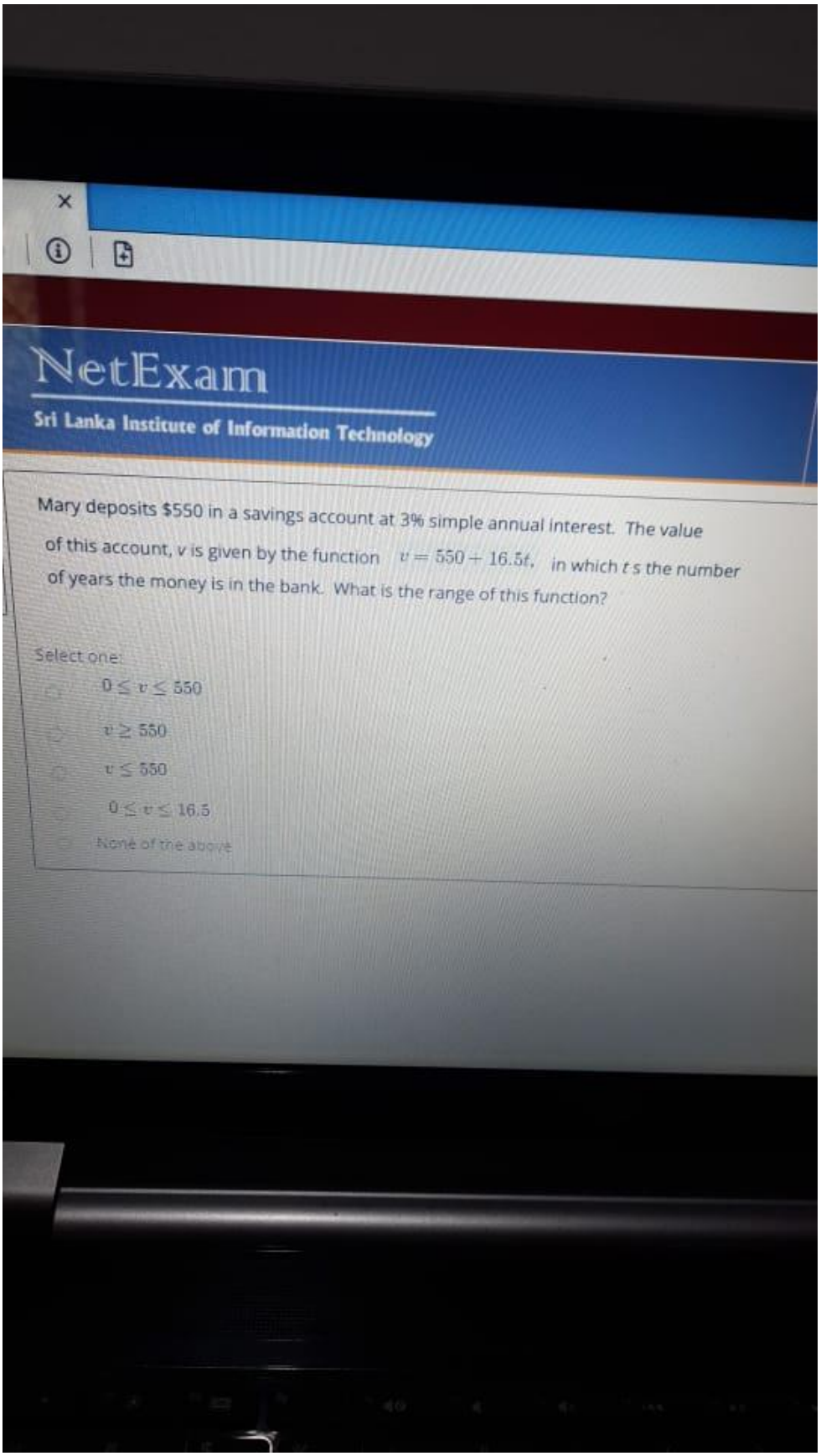
8, 13, 18, 23, 28, ...

S_{45} = 5310

Find 40th element.

a_{35} = 203


NetExam
Sri Lanka Institute of Information Technology
18
answered
out of
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 at least three boys.
Answer =
Next page



NetExam

Sri Lanka Institute of Information Technology

Mary deposits $550 in a savings account at 3% simple annual interest. The value of this account, v is given by the function $v = 550 + 16.5t$, in which t s the number of years the money is in the bank. What is the range of this function?

Select one:

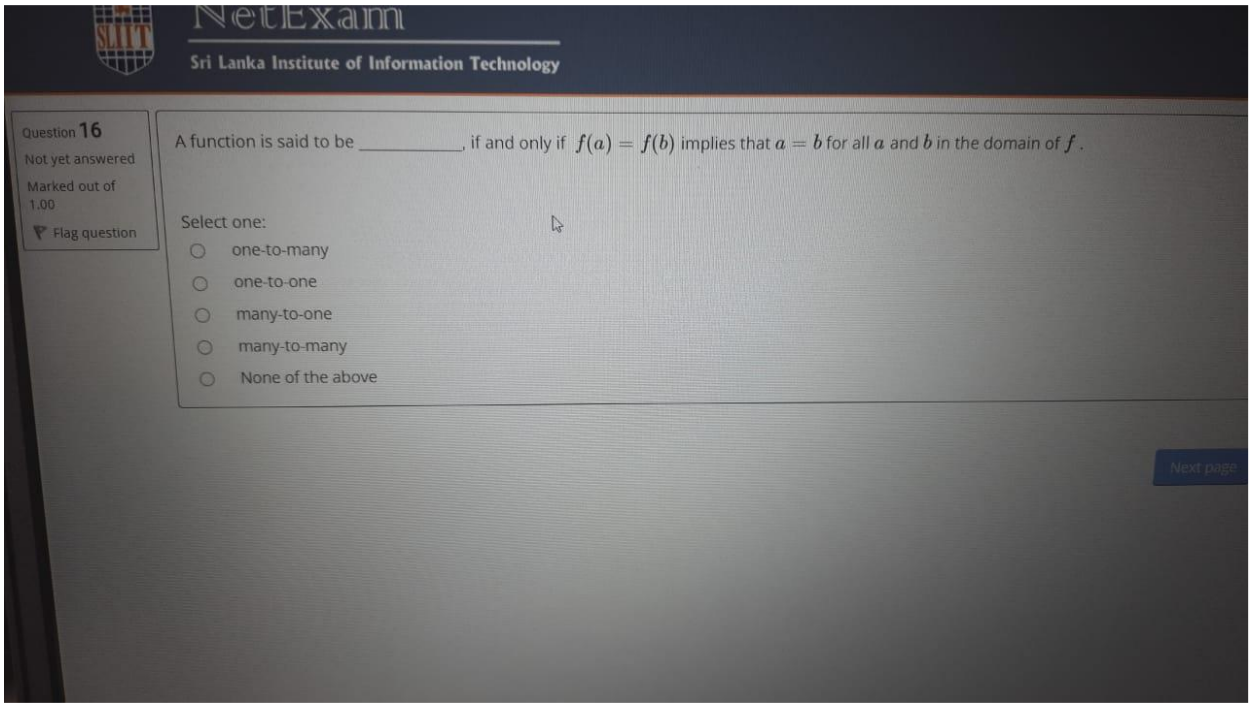
- $0 \leq v \leq 550$
- $v \geq 550$
- $v \leq 550$
- $0 \leq v \leq 16.5$
- None of the above

NetExam

Sri Lanka Institute of Information Technology

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

Answer = 91



NetExam

Sri Lanka Institute of Information Technology

A function is said to be

if and only if f(a) = f(b) implies that a = b for all a and bin the domain off

Question 16 Not yet answered Marked out of 1.00 P Flag question

Select one: O one-to-many

one-to-one many-to-one many-to-many None of the above

Next page

NetExam

Sri Lanka Institute of Information Technology

Question 16

Not yet answered

Marked out of 1.00

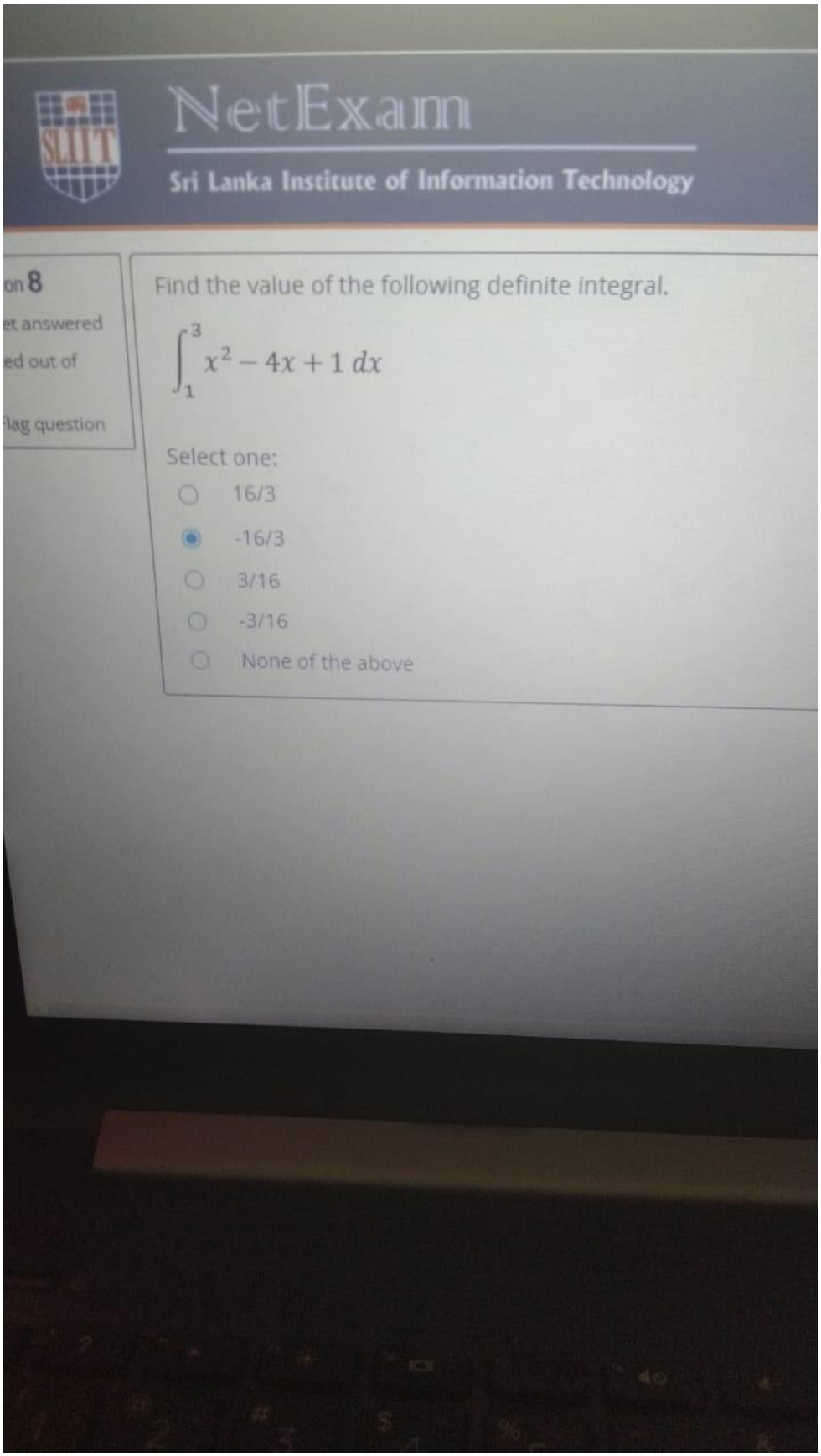
Flag question

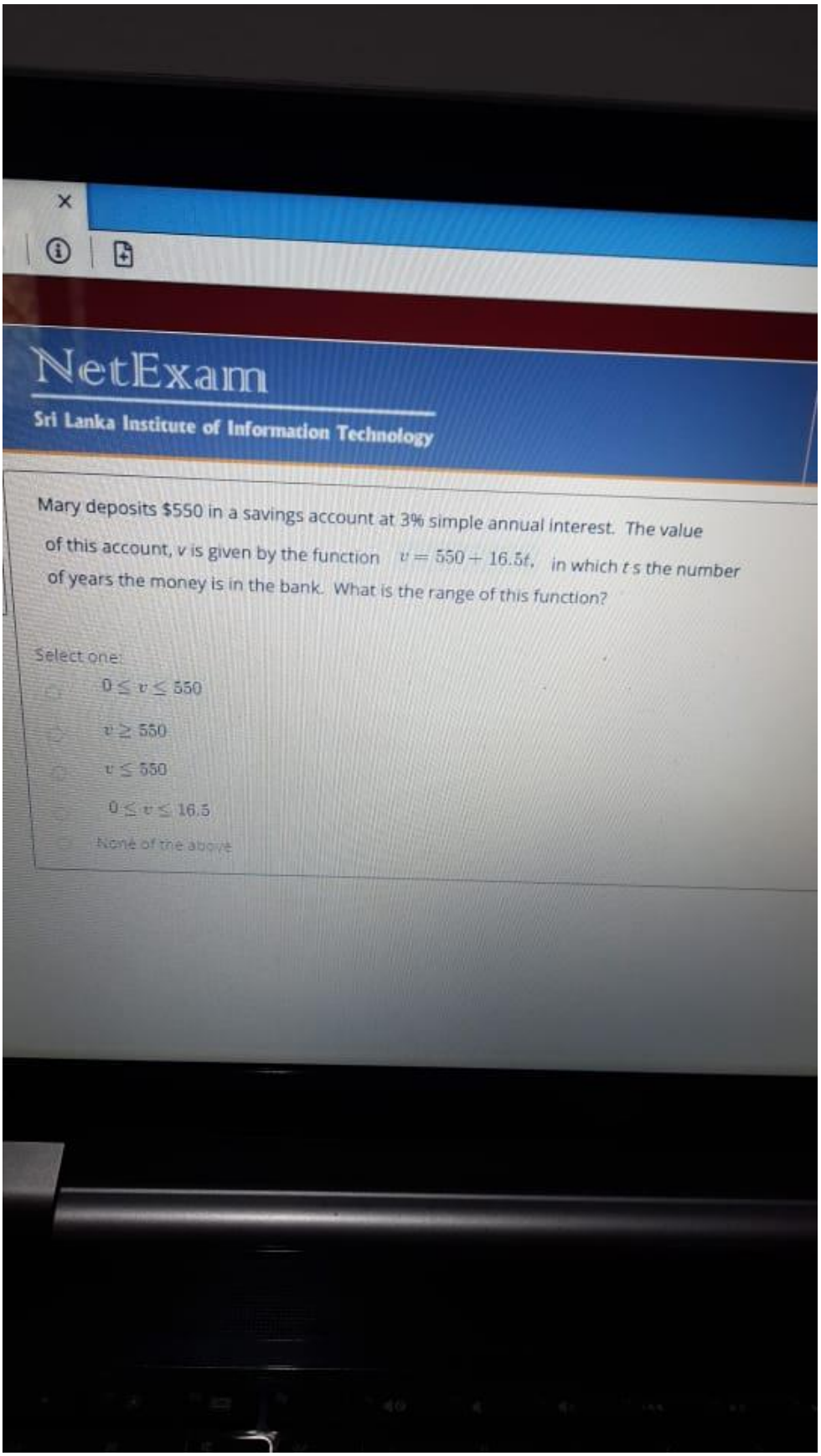
A function is said to be _____, if and only if $f(a) = f(b)$ implies that $a = b$ for all a and b in the domain of f.

Select one:

- one-to-many
- one-to-one
- many-to-one
- many-to-many
- None of the above

Next page


NetExam
Sri Lanka Institute of Information Technology
on 8
et answered
ed out of
lag question
Find the value of the following definite integral.
$\int_1^3 x^2 - 4x + 1\, dx$
Select one:
16/3
-16/3
3/16
-3/16
None of the above



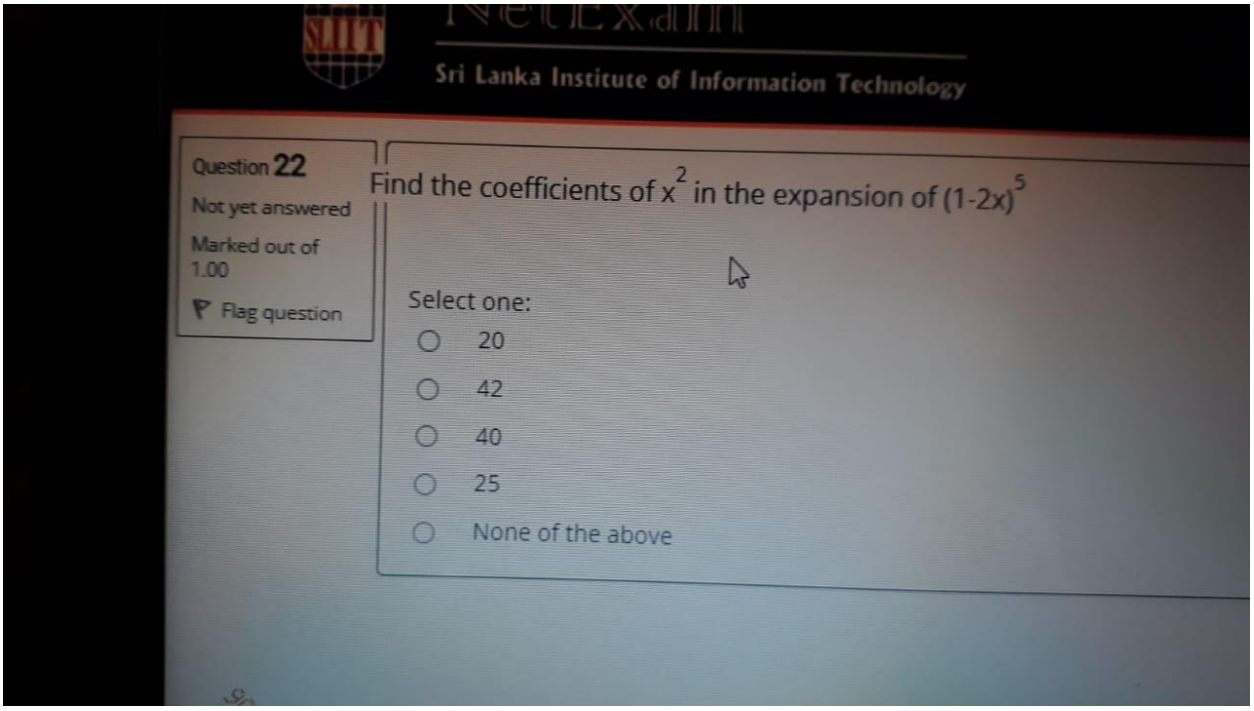
NetExam

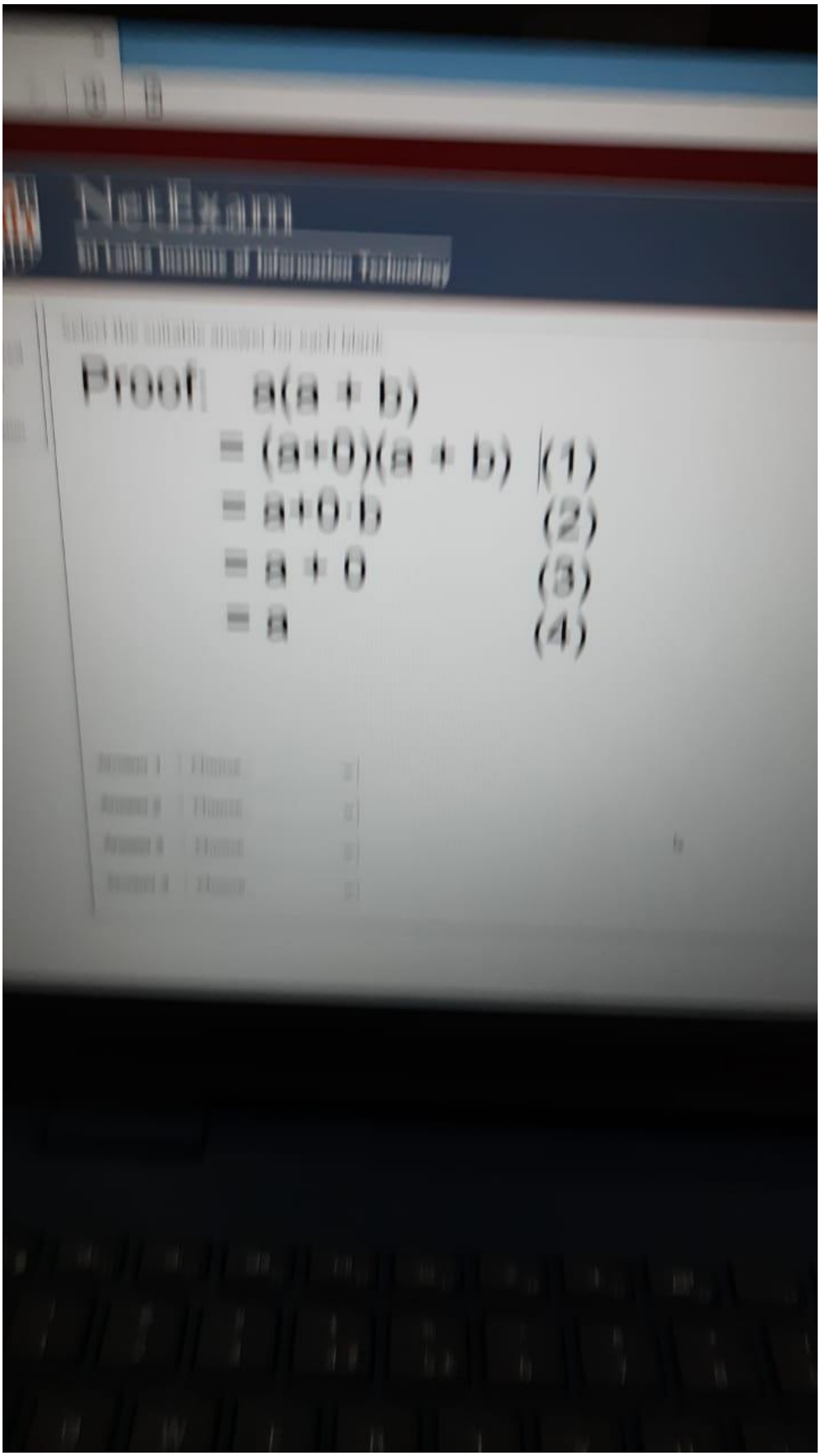
Sri Lanka Institute of Information Technology

Mary deposits $550 in a savings account at 3% simple annual interest. The value of this account, v is given by the function $v = 550 + 16.5t$, in which t s the number of years the money is in the bank. What is the range of this function?

Select one:

- $0 \leq v \leq 550$
- $v \geq 550$
- $v \leq 550$
- $0 \leq v \leq 16.5$
- None of the above


NetExam
Sri Lanka Institute of Information Technology
Question 22
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


NetExam
Proof: a(a + b)
= (a+0)(a + b) (1)
= a+0 b (2)
= a + 0 (3)
= a (4)

NetExam

Sri Lanka Institute of Information Technology

15

answered

out of

question

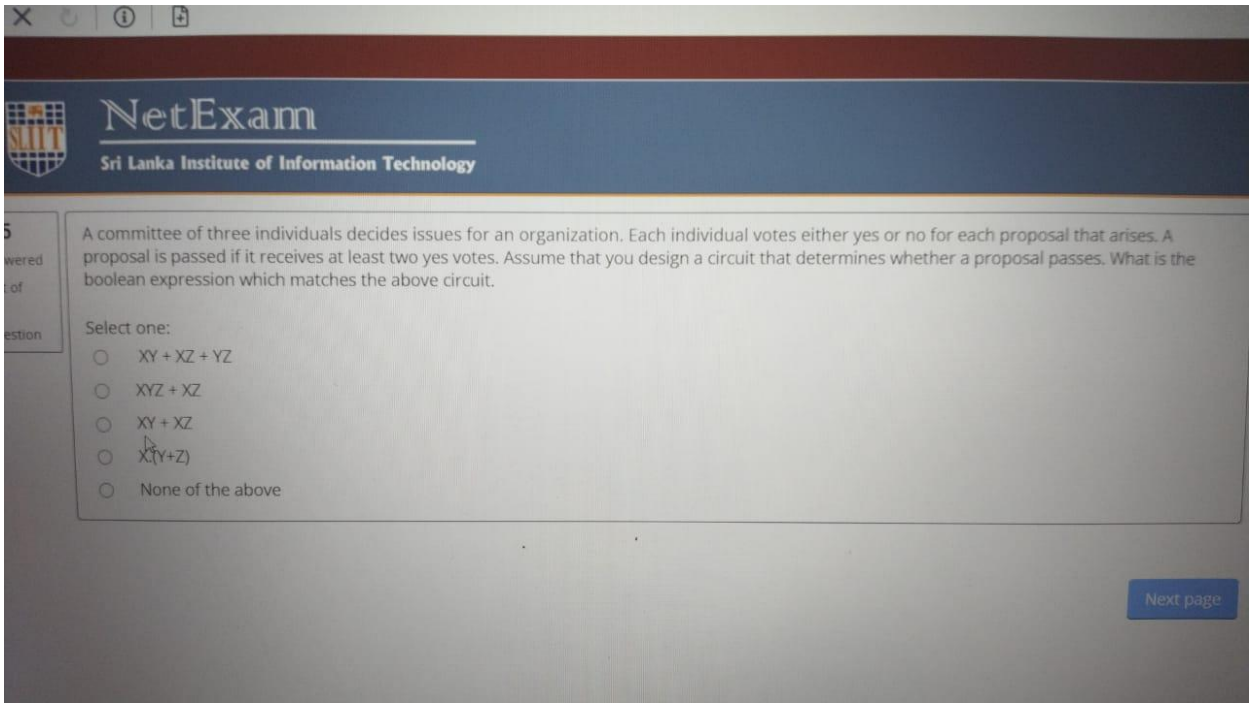
Consider the following arithmetic sequence.

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

S_{45} =

Find 40th element.

a_{35} =



'

NetExam

Sri Lanka Institute of Information Technology

wered of

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.

estion

Select one: O XY+XZ + YZ O XYZ + XZ

XY+XZ 0 X4+2) O None of the above

Next page

NetExam

Sri Lanka Institute of Information Technology

5
wered
of
estion

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:

- XY + XZ + YZ
- XYZ + XZ
- XY + XZ
- X(Y+Z)
- None of the above

Next page

NetExam

Sri Lanka Institute of Information Technology

Eight chairs are numbered 1 to 8. Two women and 3 men wish to occupy one chair each. First the women choose the chairs from amongst the chairs 1 to 4 and then men select from the remaining chairs. Find the total number of possible arrangements.

Answer :

Next page

Sri Lanka Institute of Information Technology

Consider the following arithmetic sequence.

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

S_{45} = ☐

Find 40th element.

a_{35} = ☐

Find the number of terms in the geometric progression

8, 16, 32, ..., 4096

n =

Find the 13th Element of the above sequence.

a_{13} =

NetExam

Sri Lanka Institute of Information Technology

estion 20

ot yet answered

larked out of .00

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

NetExam

Sri Lanka Institute of Information Technology

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

Select one:

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

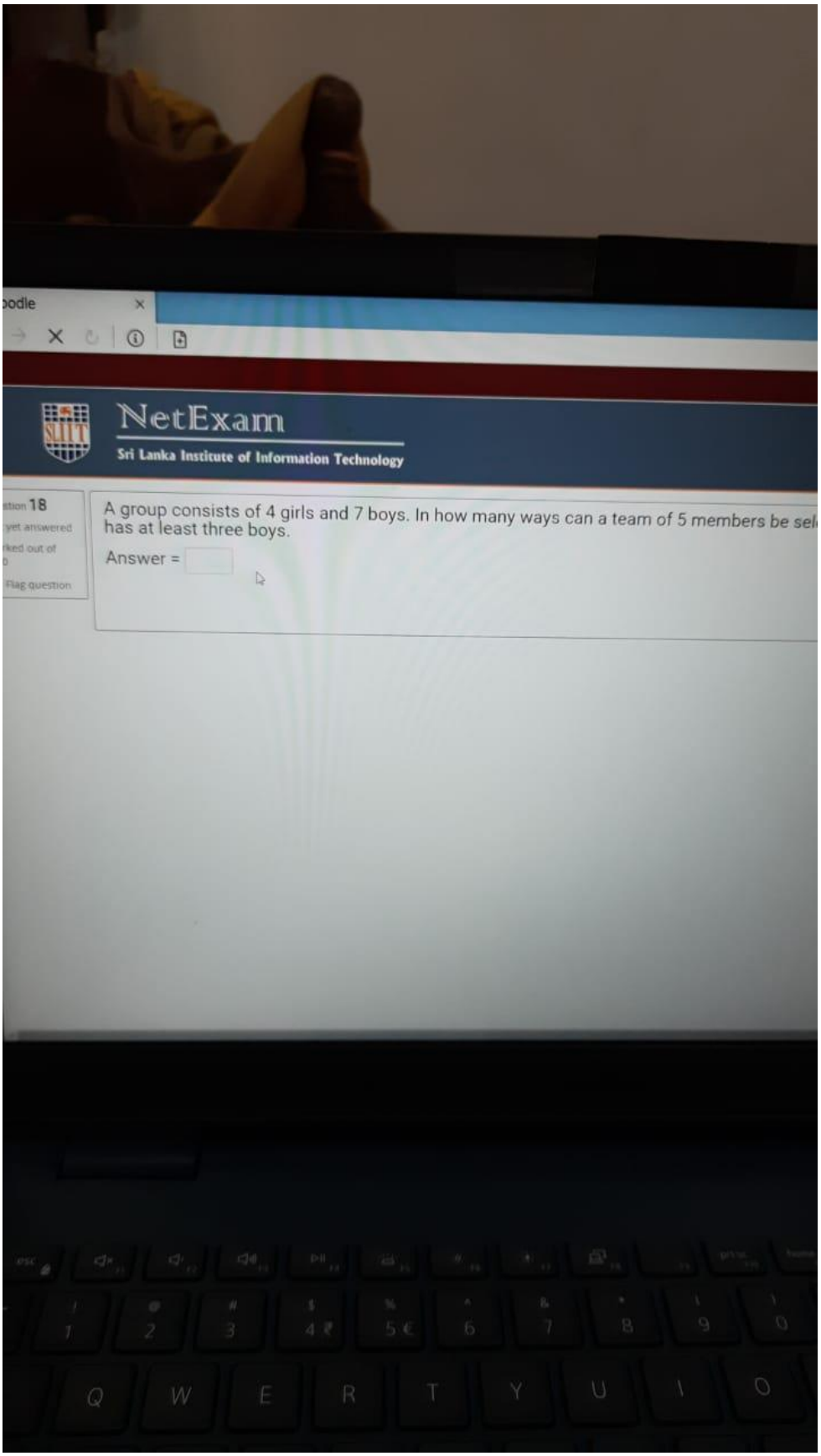
NetExamn

Sri Lanka Institute of Information Technology

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

Select one:

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


oodle
NetExam
Sri Lanka Institute of Information Technology
stion 18
yet answered
rked out of
Flag question
A group consists of 4 girls and 7 boys. In how many ways can a team of 5 members be sel
has at least three boys.
Answer =

Sri Lanka Institute of Information Technology

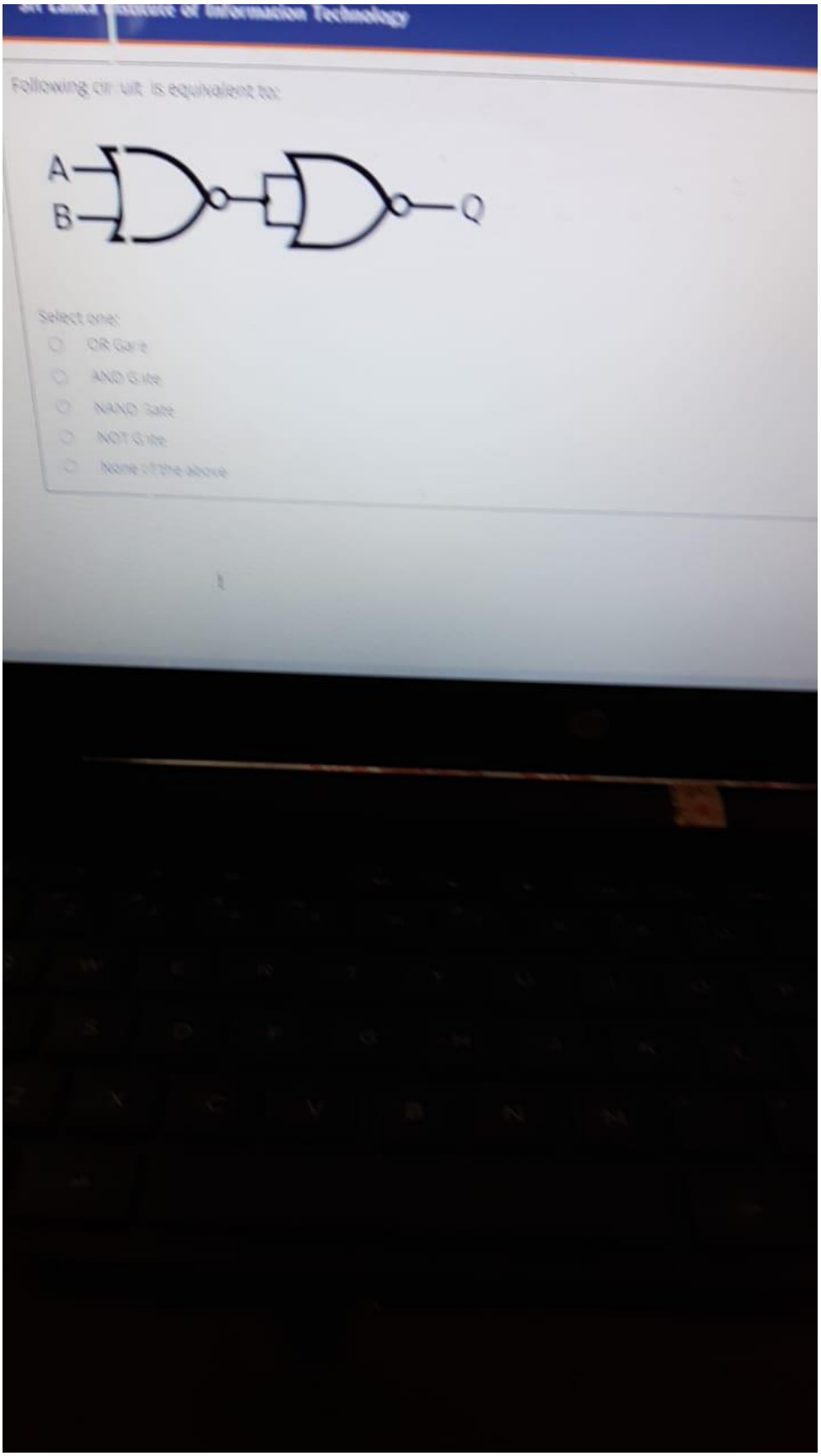
wered
of
estion

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

n =

Find the 10th Element of the above sequence.

a_{10}=

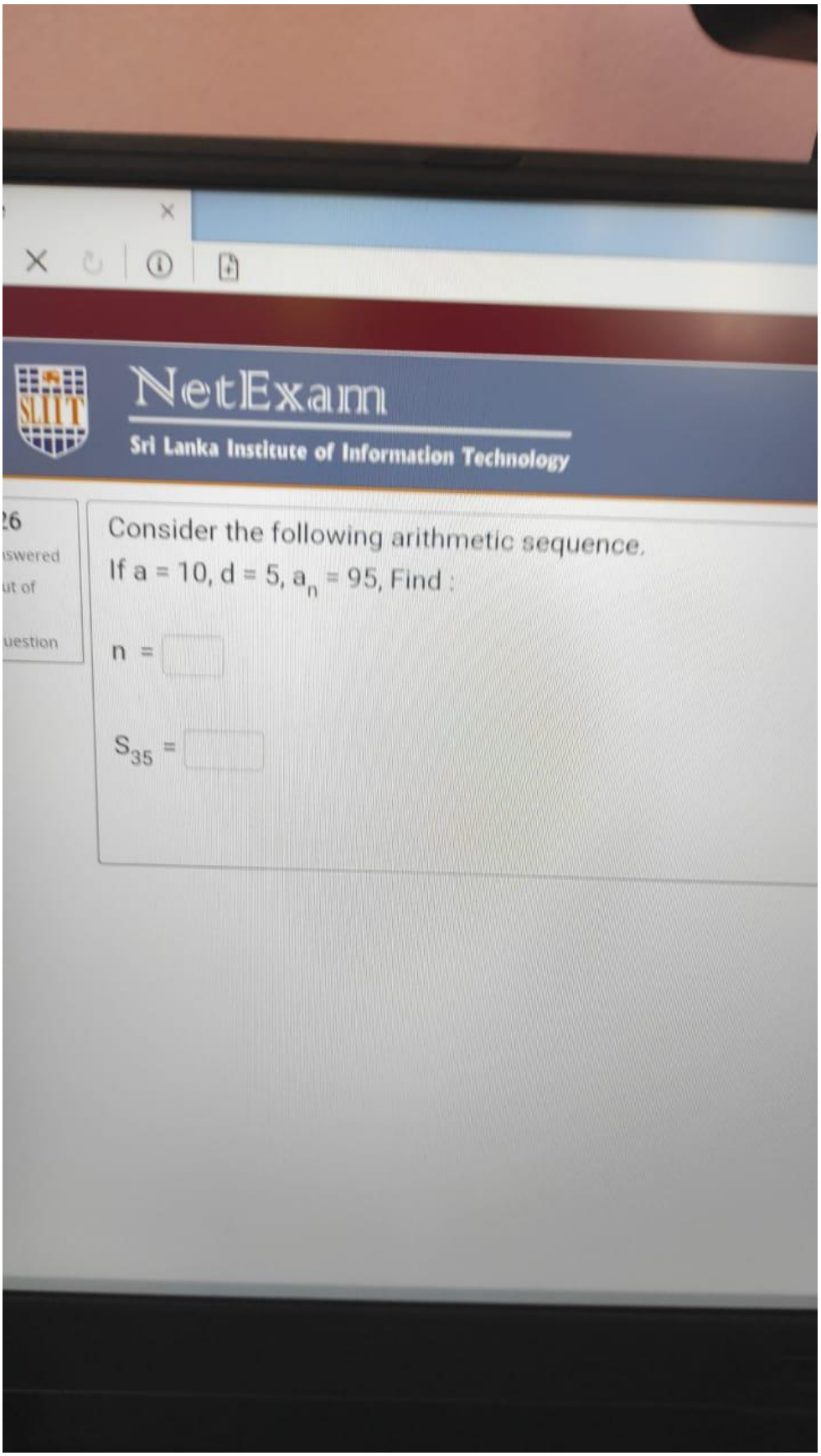

Following cir uit is equivalent to:
A
B
Q
Select one:
OR Ga e
AND G ate
NAND Gate
NOT G ate
None of the above

Find,

$$\frac{\mathrm{d}}{\mathrm{d}x}\left[\frac{x^2-5}{2x+1}\right]$$

Select one:

- $\frac{2\left(x^2+x+5\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x-5\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+6\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+11\right)}{(2x+1)^2}$
- None of the above


NetExam
Sri Lanka Institute of Information Technology
26
swered
ut of
uestion
Consider the following arithmetic sequence.
If a = 10, d = 5, a_n = 95, Find :
n =
S_{35} =

NetExamn

Sri Lanka Institute of Information Technology

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

Select one:

- 20
- 42
- 56
- 40
- None of the above

NetExamn

Sri Lanka Institute of Information Technology

Select the suitable answer for each blank.

proof:

$AB + A$

$AB + A1$ [_ 1 _]

$A(B + 1)$ [_ 2 _]

$A(1)$ [_ 3 _]

A [_ 4 _]

Answer 1 Choose...

Answer 2 Choose...

Answer 3 Choose...

Answer 4 Choose...

Sri Lanka Institute of Information Technology

Find the number of terms in the geometric progression
8, 16, 32, ..., 4096

n =

Find the 13th Element of the above sequence.

a_{13} =

NetExam

Sri Lanka Institute of Information Technol

Convert the number 1264_8 to equivalent decin

Select one:

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

NetExamn

Sri Lanka Institute of Information Technology

Find the value of the following definite integral.

$$\int_0^1 |2x - 12| dx$$

Select one:

- 12
- 11
- 13
- -12
- None of the above

NetExamn

Sri Lanka Institute of Information Technology

Consider the following arithmetic sequence.

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

S_{30} = ____

Find 40th element.

a_{40} = ____

NetExam

Sri Lanka Institute of Information Technology

0

swered

t of

estion

Find the value of the following definite integral.

$$\int_0^1 |2x-12|dx$$

Select one:

- 12
- 11
- 13
- -12
- None of the above

NetExam

Sri Lanka Institute of Information Technology

d

n

Find the value of the following definite integral.

$$\int_0^1 |2x-12|dx$$

Select one:

- 12
- 11
- 13
- -12
- None of the above

NetExam

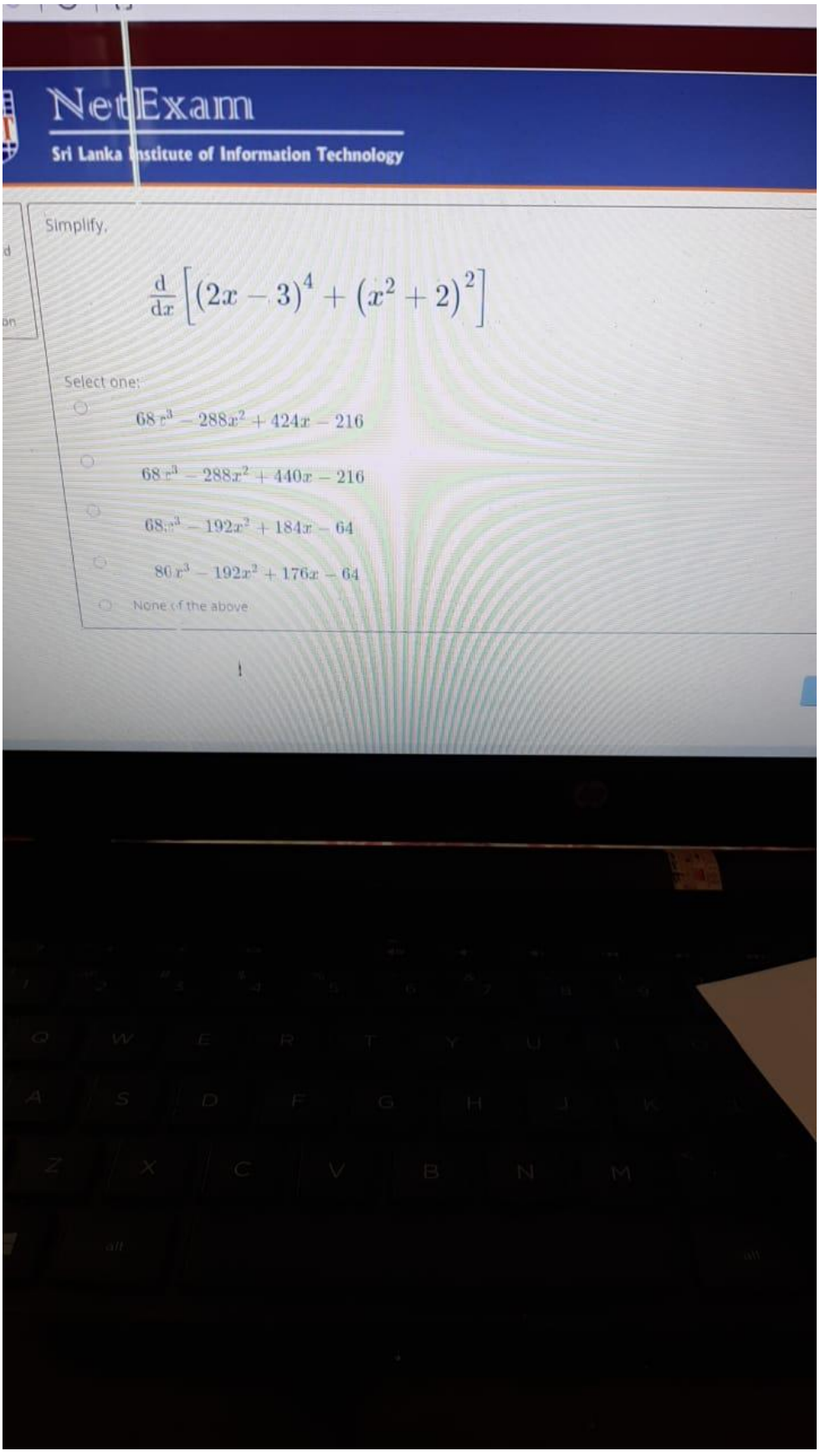
Sri Lanka Institute of Information Technology

Simplify.

$$\frac{\mathrm{d}}{\mathrm{d}x}\left[(2x-3)^4+(x^2+2)^2\right]$$

Select one:

- $68x^3-288x^2+424x-216$
- $68x^3-288x^2+440x-216$
- $68x^3-192x^2+184x-64$
- $86x^3-192x^2+176x-64$
- None of the above


NetExam
Sri Lanka Institute of Information Technology
Simplify.
$\frac{d}{dx}\left[(2x-3)^4+(x^2+2)^2\right]$
Select one:
$68x^3-288x^2+424x-216$
$68x^3-288x^2+440x-216$
$68x^3-192x^2+184x-64$
$80x^3-192x^2+176x-64$
None of the above

on 20
t answered
t out of
t question

Select the suitable answer for each blank.

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

A.A + A.C + A.B + B.C – Distributive law

A + A.C + A.B + B.C – (1)

A(1 + C) + A.B + B.C – Distributive law

A.1 + A.B + B.C – (2)

A(1 + B) + B.C – Distributive law

A.1 + B.C – (3)

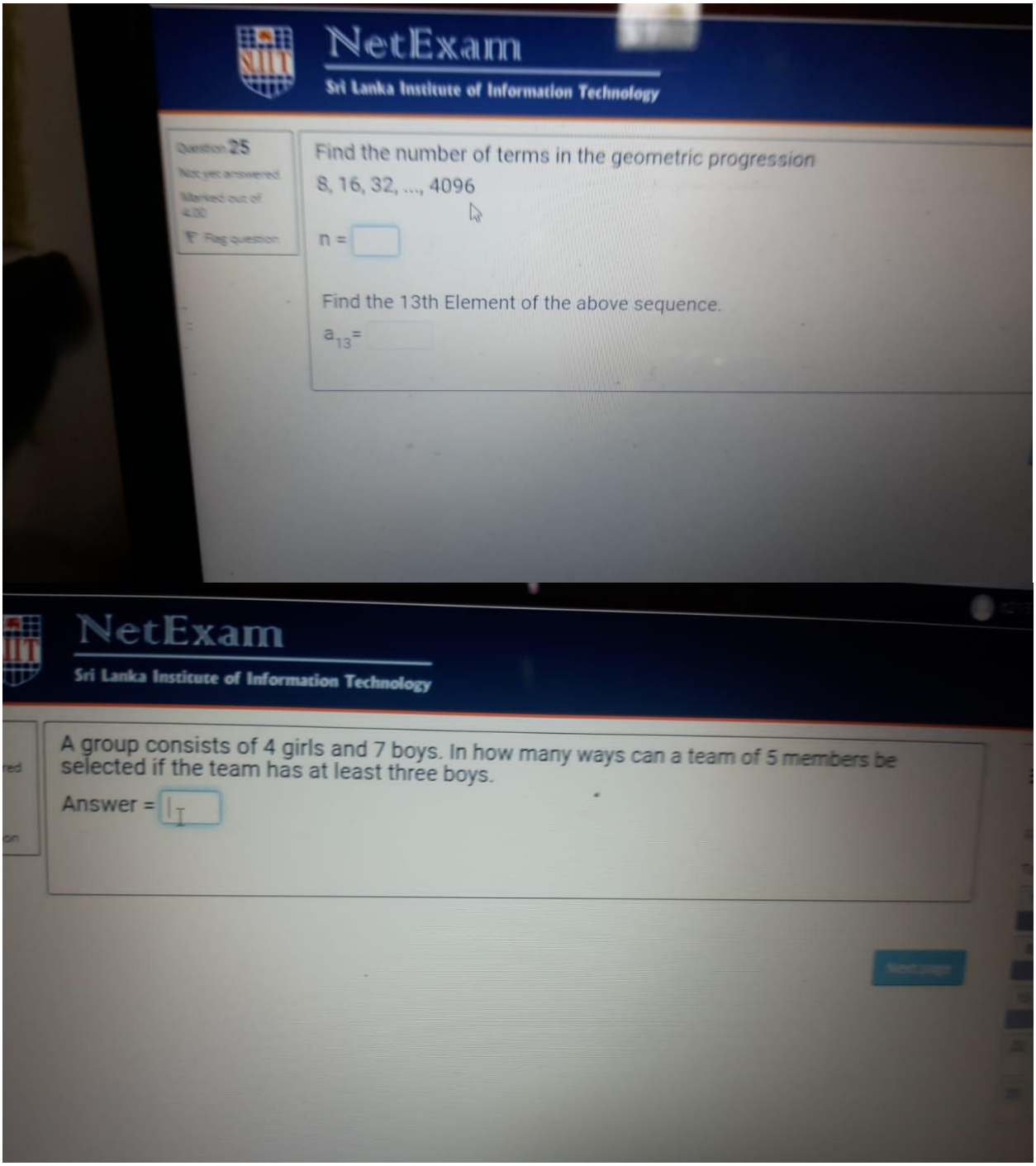
Q = A + (B.C) – (4)

Answer 1 Choose...

Answer 2 Choose...

Answer 3 Choose...

Answer 4 Choose...


NetExam
Sri Lanka Institute of Information Technology
Question 25
Not yet answered
Marked out of 4.00
Flag question
Find the number of terms in the geometric progression
8, 16, 32, ..., 4096
n =
Find the 13th Element of the above sequence.
a_{13}=
NetExam
Sri Lanka Institute of Information Technology
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 =

NetExam

Sri Lanka Institute of Information Technology

Consider the following arithmetic sequence.

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

S_{45} =

Find 40th element.

a_{35} =

Sri Lanka Institute of Information Technology

Select the suitable answer for each blank.

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

A.A + A.C + A.B + B.C – Distributive law

A + A.C + A.B + B.C – (1)

A(1 + C) + A.B + B.C – Distributive law

A.1 + A.B + B.C – (2)

A(1 + B) + B.C – Distributive law

A.1 + B.C – (3)

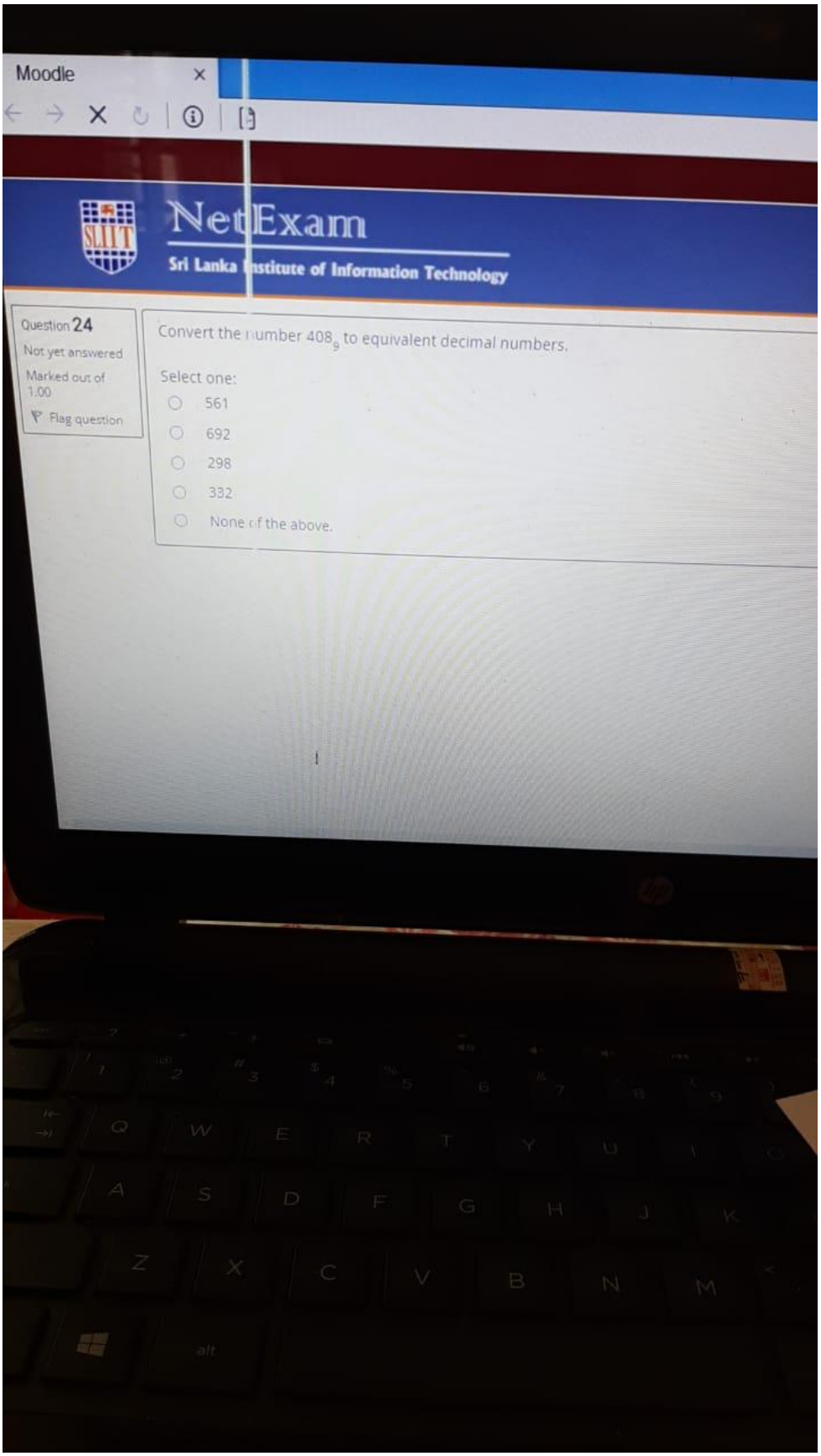
Q = A + (B.C) – (4)

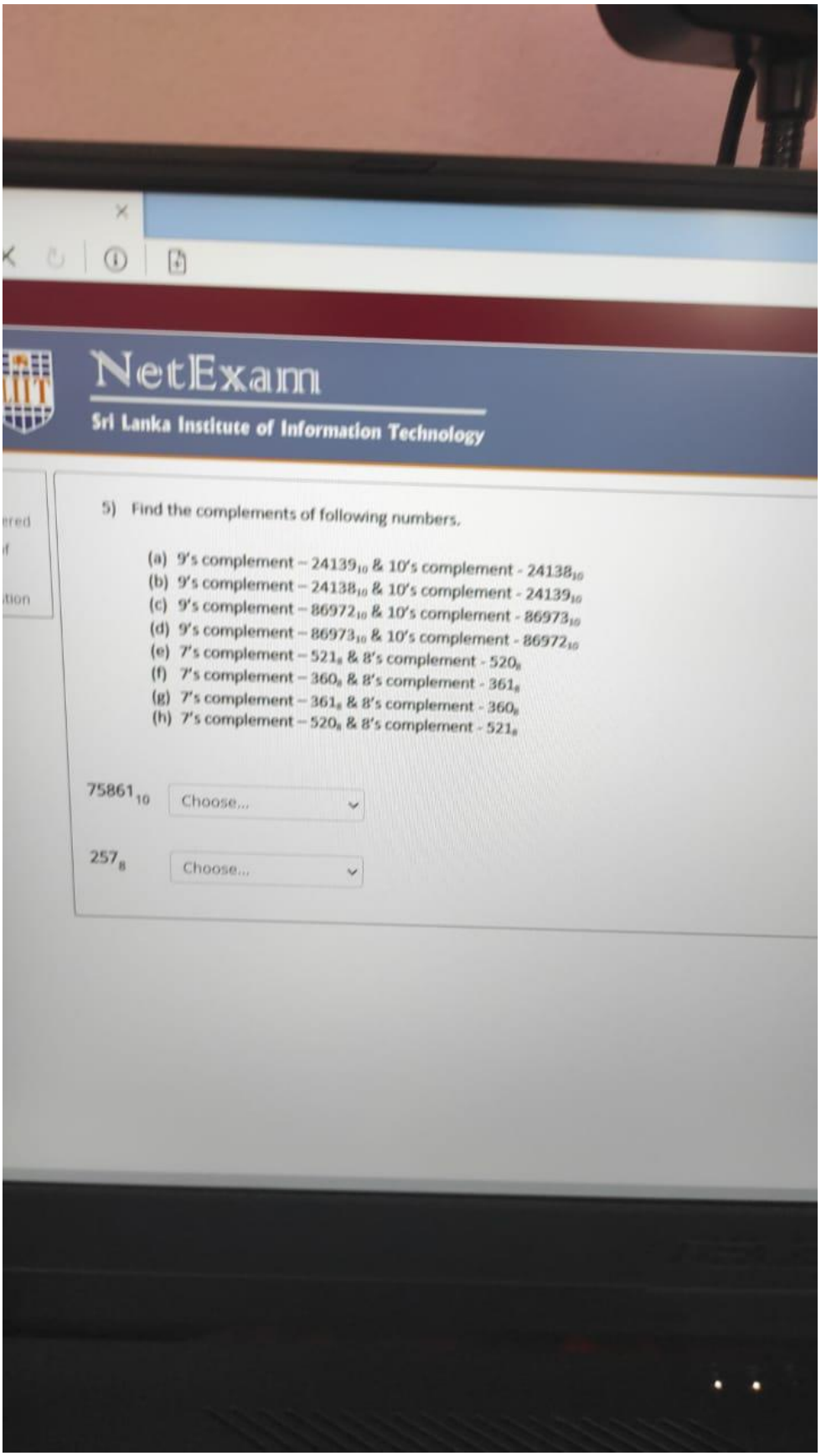
Answer 1 Choose...

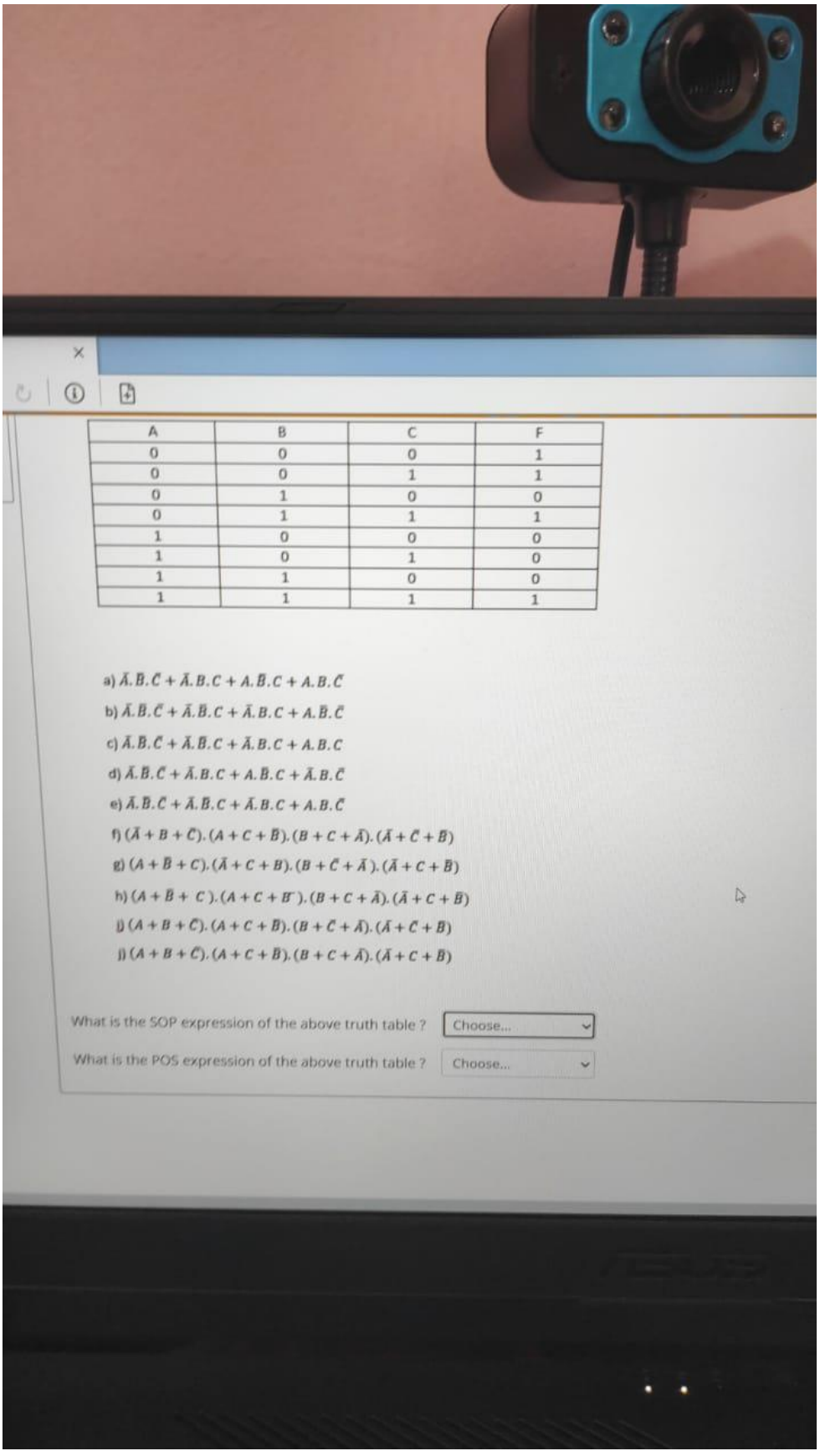
Answer 2 Choose...

Answer 3 Choose...

Answer 4 Choose...


Moodle
NetExam
Sri Lanka Institute of Information Technology
Question 24
Not yet answered
Marked out of 1.00
Flag question
Convert the number 408_9 to equivalent decimal numbers.
Select one:
561
692
298
332
None of the above.


NetExam
Sri Lanka Institute of Information Technology
5) Find the complements of following numbers.
(a) 9's complement – 24139_{10} & 10's complement - 24138_{10}
(b) 9's complement – 24138_{10} & 10's complement - 24139_{10}
(c) 9's complement – 86972_{10} & 10's complement - 86973_{10}
(d) 9's complement – 86973_{10} & 10's complement - 86972_{10}
(e) 7's complement – 521_8 & 8's complement - 520_8
(f) 7's complement – 360_8 & 8's complement - 361_8
(g) 7's complement – 361_8 & 8's complement - 360_8
(h) 7's complement – 520_8 & 8's complement - 521_8
75861_{10} Choose...
257_8 Choose...



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	0
1	1	1	1

a) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.\bar{C}$

b) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.\bar{B}.\bar{C}$

c) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.B.C$

d) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + \bar{A}.B.\bar{C}$

e) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.B.\bar{C}$

f) $(\bar{A} + B + \bar{C}).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

g) $(A + \bar{B} + C).(\bar{A} + C + B).(B + \bar{C} + \bar{A}).(\bar{A} + C + \bar{B})$

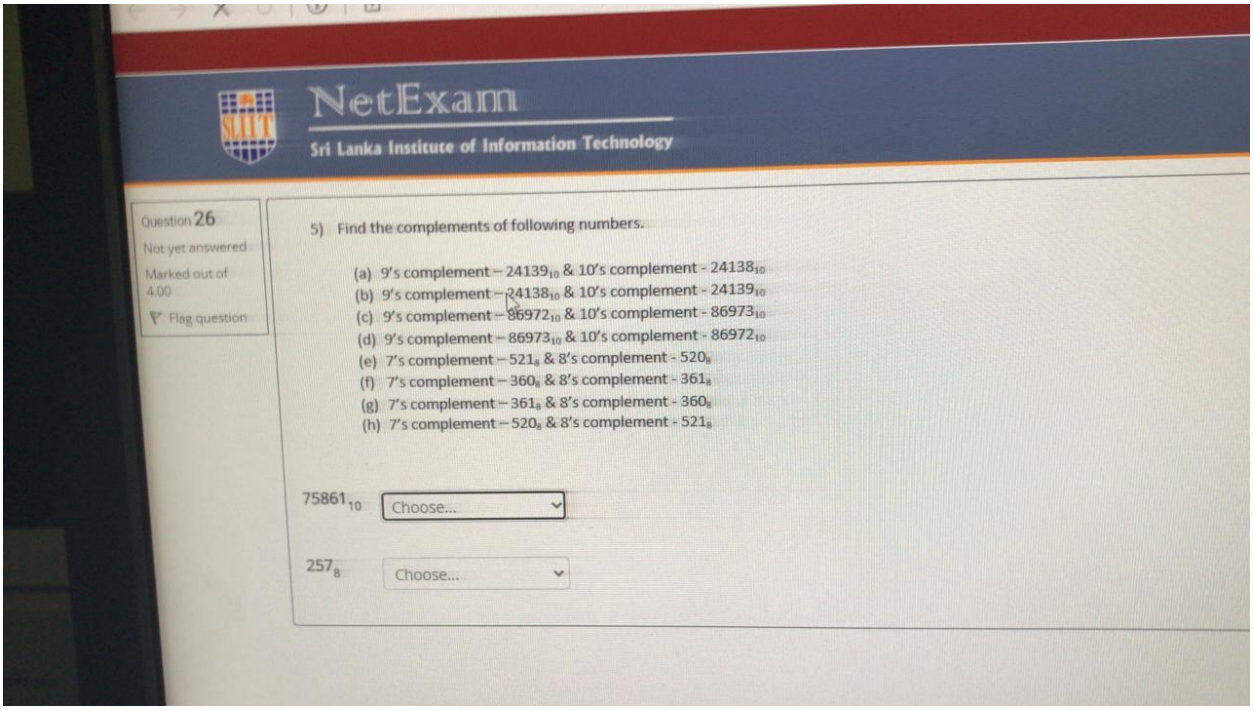
h) $(A + \bar{B} + C).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$

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...


NetExam
Sri Lanka Institute of Information Technology
Question 26
Not yet answered
Marked out of 4.00
Flag question
5) Find the complements of following numbers.
(a) 9's complement – 24139_{10} & 10's complement - 24138_{10}
(b) 9's complement – 24138_{10} & 10's complement - 24139_{10}
(c) 9's complement – 86972_{10} & 10's complement - 86973_{10}
(d) 9's complement – 86973_{10} & 10's complement - 86972_{10}
(e) 7's complement – 521_8 & 8's complement - 520_8
(f) 7's complement – 360_8 & 8's complement - 361_8
(g) 7's complement – 361_8 & 8's complement - 360_8
(h) 7's complement – 520_8 & 8's complement - 521_8
75861_{10} Choose...
257_8 Choose...

NetExam

Sri Lanka Institute of Information Technology

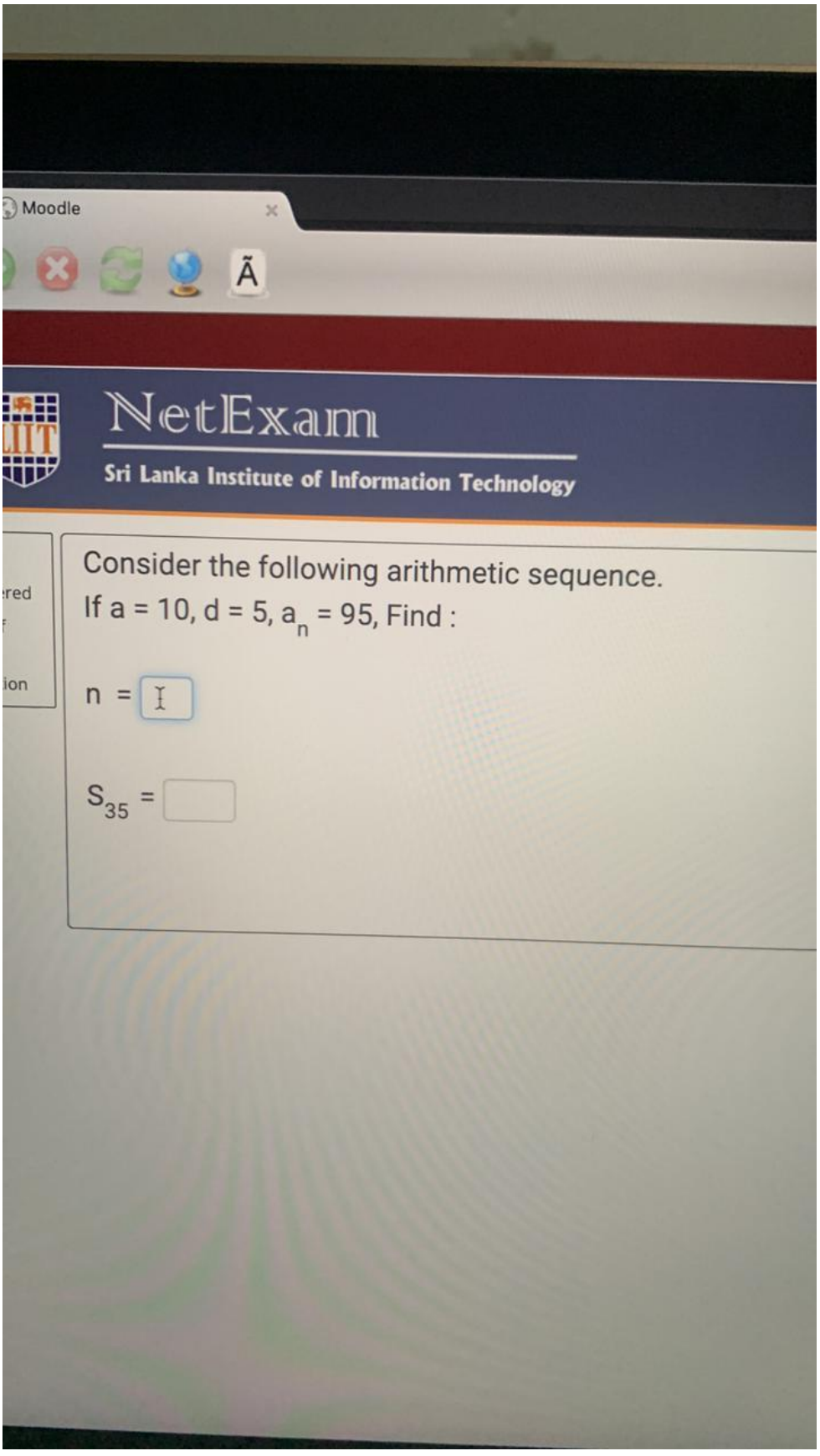
on 19
et answered
ed out of
ag question

Find,

$$\int \left(x^3 - 4x + 5\right) \mathrm{d}x$$

Select one:

- $\frac{x\left(x^3 - 10x + 20\right)}{4} + C$
- $\frac{x\left(x^3 - 10x + 24\right)}{4} + C$
- $\frac{x\left(x^3 - 8x + 20\right)}{4} + C$
- $\frac{x\left(x^3 - 10x - 12\right)}{4} + C$
- None of the above


Moodle
NetExam
Sri Lanka Institute of Information Technology
Consider the following arithmetic sequence.
If a = 10, d = 5, a_n = 95, Find :
n =
S_{35} =

$$\frac{\mathrm{d}}{\mathrm{d}x}\left[\frac{x^2-9}{2x+1}\right]$$

Select one:

- $\frac{2\left(x^2+x+9\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+7\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+6\right)}{(2x+1)^2}$
- $\frac{2\left(x^2+x+11\right)}{(2x+1)^2}$
- None of the above

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

a) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.\bar{C}$

b) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.\bar{B}.\bar{C}$

c) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.C$

d) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + \bar{A}.B.\bar{C}$

e) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.B.\bar{C}$

f) $(A + \bar{B} + C).(\bar{A} + \bar{C} + B).(\bar{B} + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

g) $(A + \bar{B} + C).(A + C + \bar{B}).(B + \bar{C} + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

h) $(A + \bar{B} + C).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$

j) $(A + B + \bar{C}).(A + C + \bar{B}).(B + \bar{C} + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

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 ?

What is the POS expression of the above truth table ?

Choose...
(a)
None of the above
(j)
(e)
(f)
(h)
(b)
(i)
(d)
(g)
(c)

(i)

Sri Lanka Institute of Information Technology

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

a) $\bar{A}.B.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.\bar{C}$

b) $\bar{A}.B.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.\bar{B}.\bar{C}$

c) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.C$

d) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + \bar{A}.B.\bar{C}$

e) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.B.\bar{C}$

f) $(A + \bar{B} + C).(\bar{A} + \bar{C} + B).(\bar{B} + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

g) $(A + \bar{B} + C).(A + C + \bar{B}).(B + \bar{C} + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

h) $(A + \bar{B} + C).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$

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 ? (i)

What is the POS expression of the above truth table ? (i)

odle

NetExam

Sri Lanka Institute of Information Technology

stion 26

t yet answered

arked out of
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 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:

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

Next page

odle

NetExam

Sri Lanka Institute of Information Technology

stion 26

yet answered

rked out of
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 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:

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

Next page

NetExam

Sri Lanka Institute of Information Technology

4

wered

t of

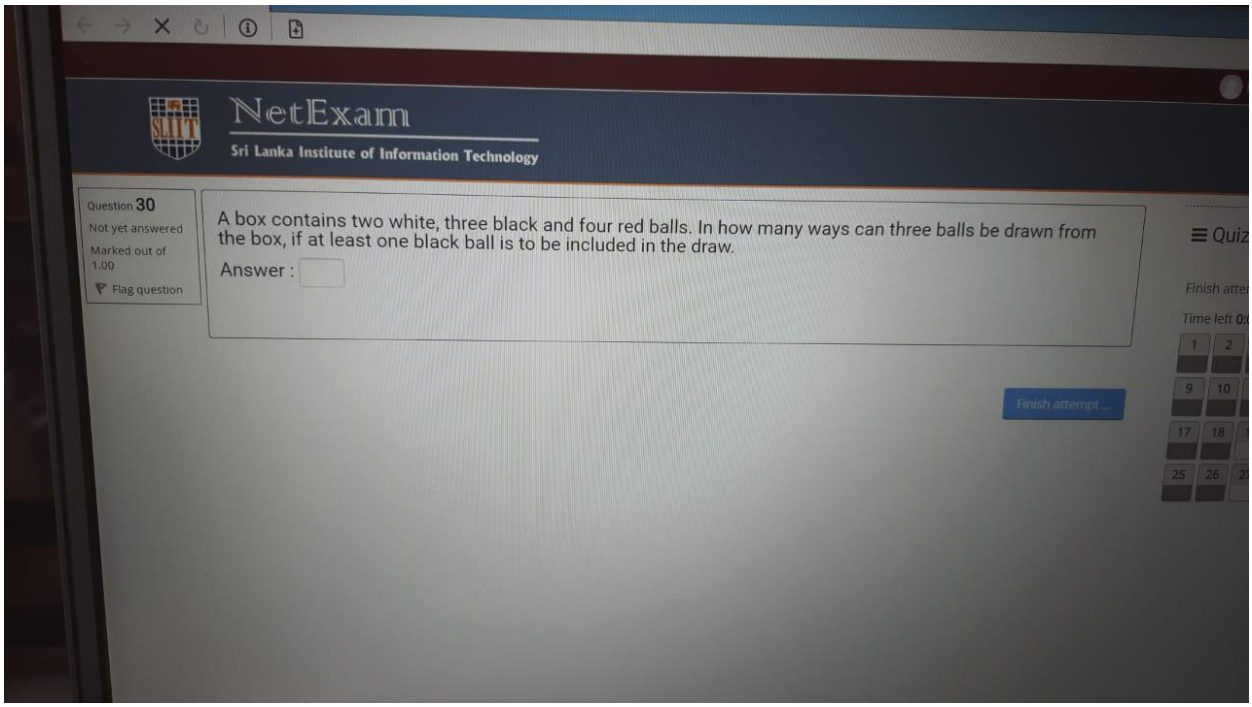
estion

Differentiate,

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

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



'

SLIIT

NetExam

Sri Lanka Institute of Information Technology

= Quiz

Question 30 Not yet answered Marked out of 1.00 P Flag question

A box contains two white, three black and four red balls. In how many ways can three balls be drawn from the box, if at least one black ball is to be included in the draw. Answer:

Finish atte

Time left

9

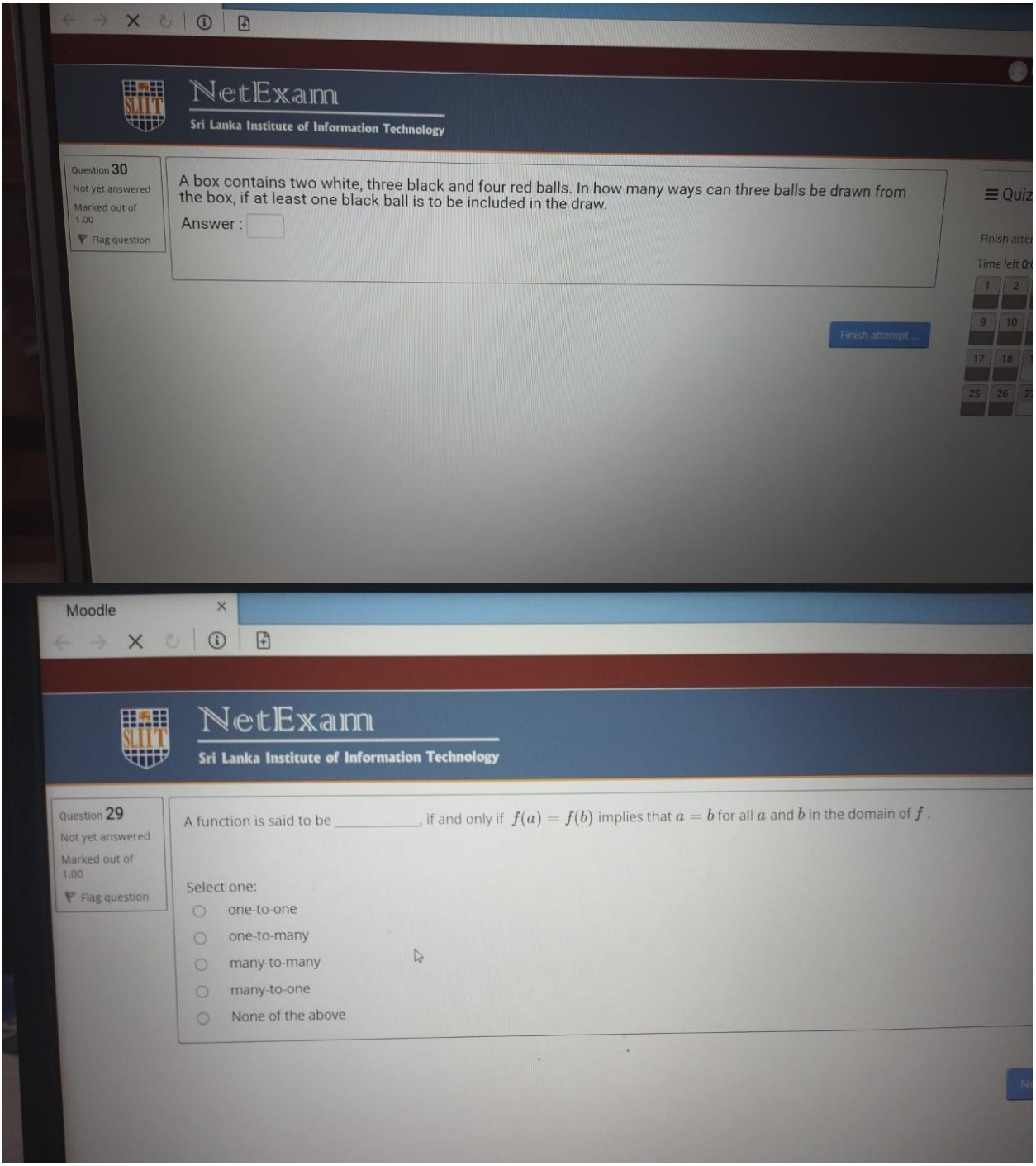
10

Finish attempt

25

26

2


NetExam
Sri Lanka Institute of Information Technology
Question 30
Not yet answered
Marked out of 1.00
Flag question
A box contains two white, three black and four red balls. In how many ways can three balls be drawn from the box, if at least one black ball is to be included in the draw.
Answer :
Finish attempt ...
Moodle
NetExam
Sri Lanka Institute of Information Technology
Question 29
Not yet answered
Marked out of 1.00
Flag question
A function is said to be _____, if and only if $f(a) = f(b)$ implies that $a = b$ for all a and b in the domain of f.
Select one:
one-to-one
one-to-many
many-to-many
many-to-one
None of the above

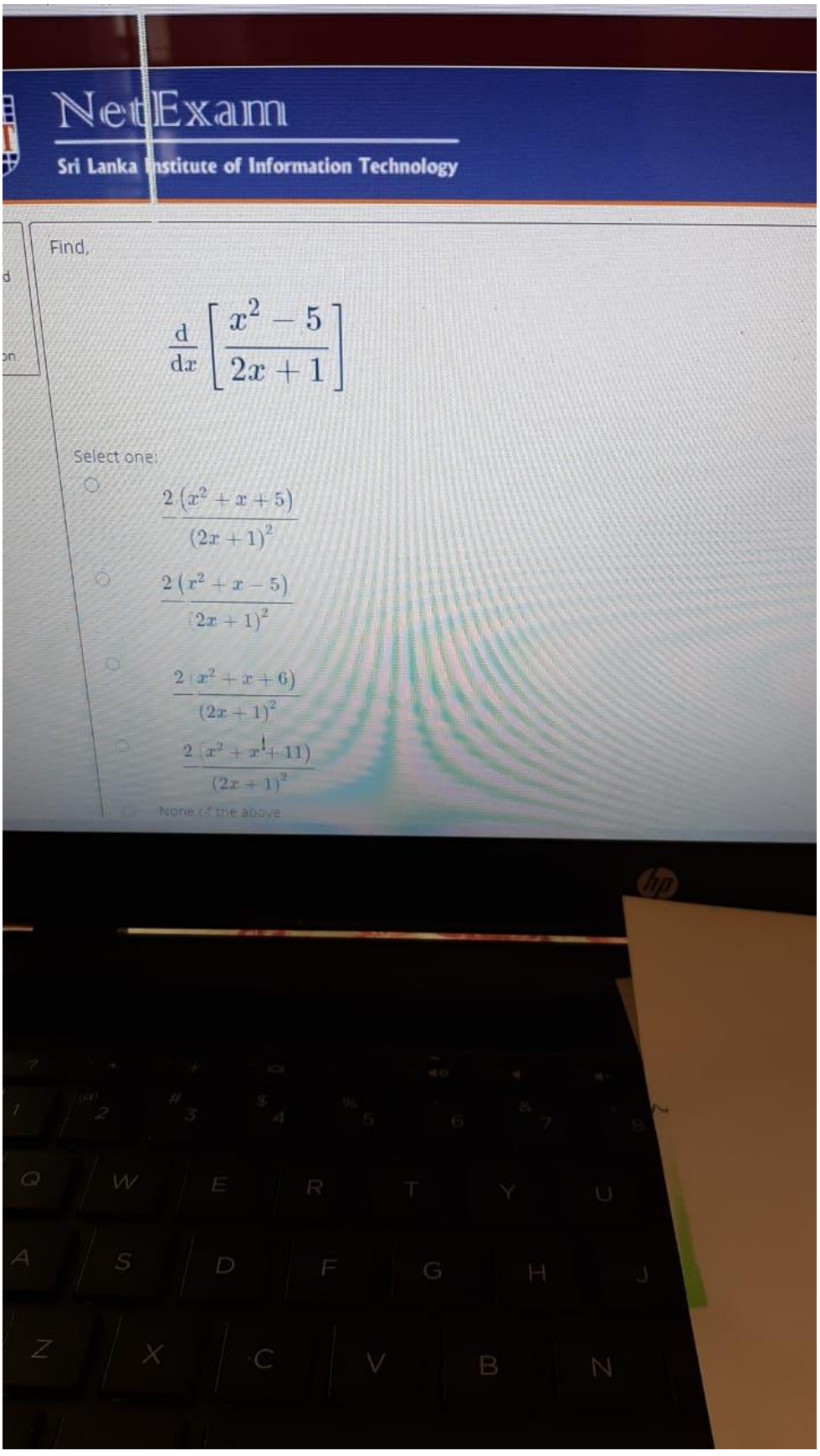
NetExam

Sri Lanka Institute of Information Technology

Calculate the following.

$^{10}C_6 =$

$^{10}P_6 =$


NetExam
Sri Lanka Institute of Information Technology
Find,
$\frac{d}{dx}\left[\frac{x^2-5}{2x+1}\right]$
Select one:
$\frac{2(x^2+x+5)}{(2x+1)^2}$
$\frac{2(x^2+x-5)}{(2x+1)^2}$
$\frac{2(x^2+x+6)}{(2x+1)^2}$
$\frac{2(x^2+x+11)}{(2x+1)^2}$
None of the above

NetExam

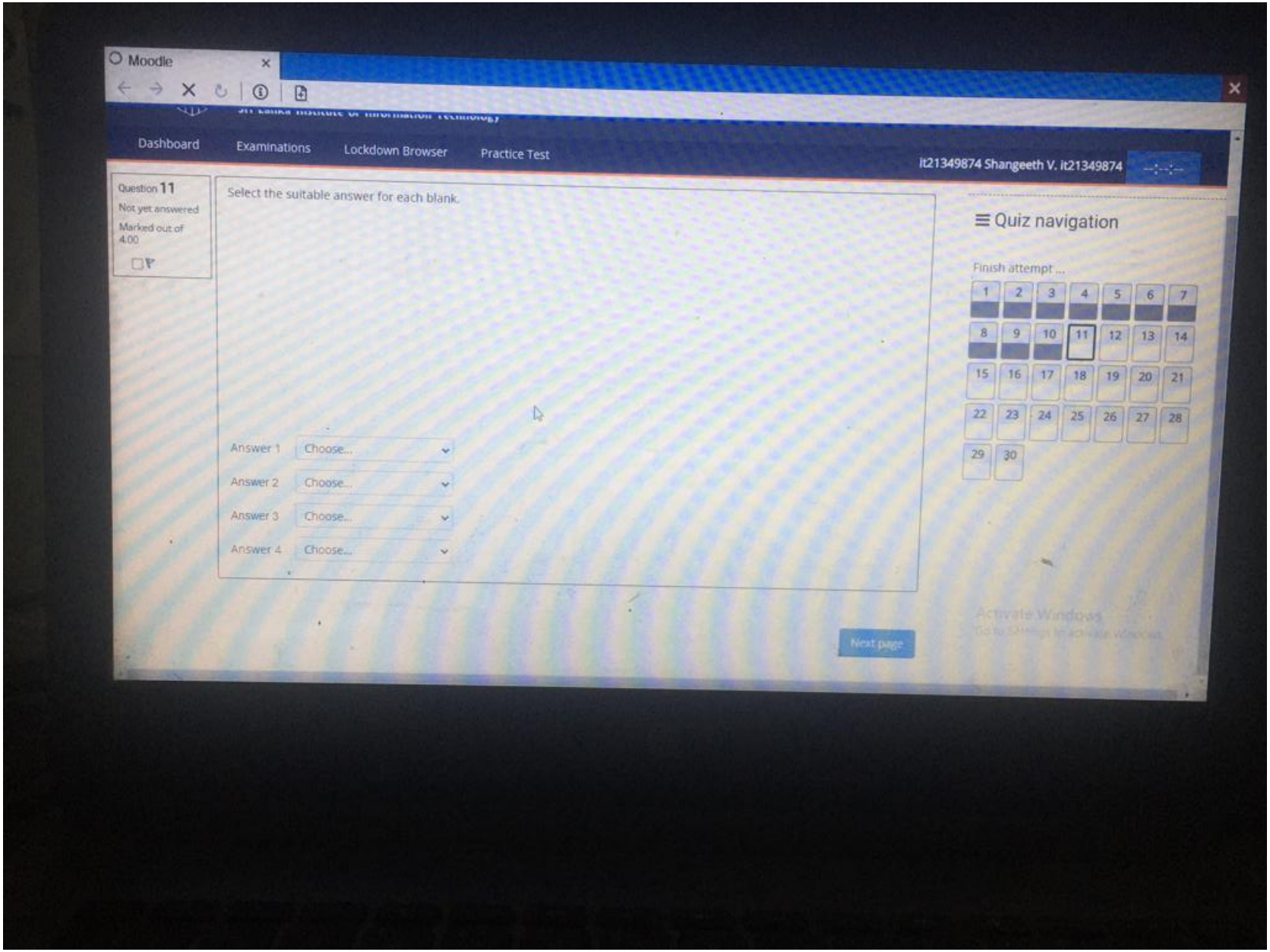
Sri Lanka Institute of Information Technology

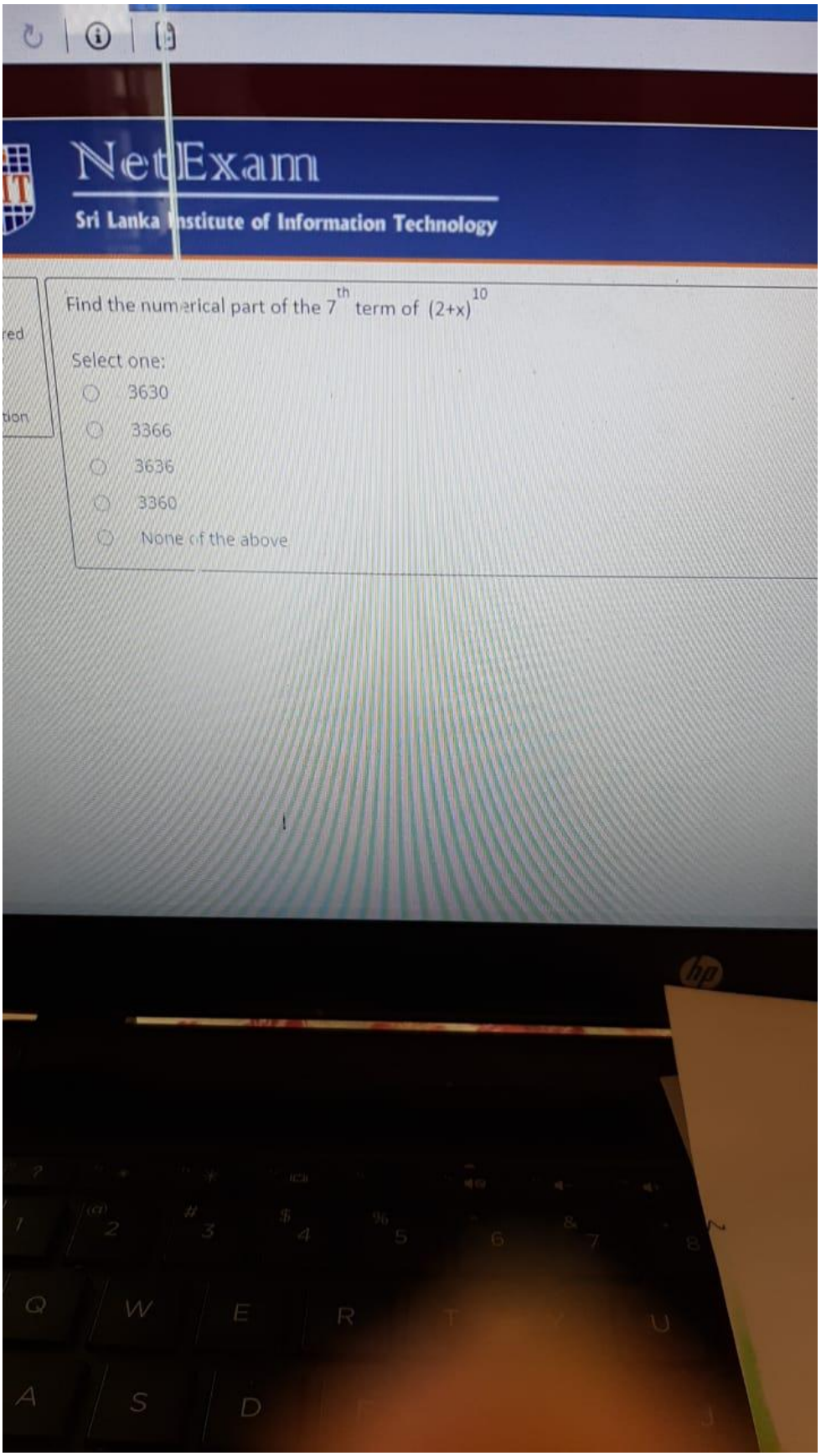
Simplify,

$$\int_{2}^{3} |2x - 5| \, \mathrm{d}x$$

Select one:

- -0.5
- 0.5
- 1
- -1
- 2


Moodle
Dashboard
Examinations
Lockdown Browser
Practice Test
it21349874 Shangeeth V. it21349874
Question 11
Not yet answered
Marked out of 4.00
Select the suitable answer for each blank.
Answer 1 Choose...
Answer 2 Choose...
Answer 3 Choose...
Answer 4 Choose...
Next page
Quiz navigation
Finish attempt ...
1 2 3 4 5 6 7
8 9 10 11 12 13 14
15 16 17 18 19 20 21
22 23 24 25 26 27 28
29 30


NetExam
Sri Lanka Institute of Information Technology
Find the numerical part of the 7th term of (2+x)10
Select one:
3630
3366
3636
3360
None of the above

Sri Lanka Institute of Information Technology

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) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.\bar{C}$

b) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.\bar{B}.\bar{C}$

c) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + A.B.C$

d) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.B.C + A.\bar{B}.C + \bar{A}.B.\bar{C}$

e) $\bar{A}.\bar{B}.\bar{C} + \bar{A}.\bar{B}.C + \bar{A}.B.C + A.B.\bar{C}$

f) $(A + \bar{B} + C).(\bar{A} + \bar{C} + B).(\bar{B} + C + \bar{A}).(\bar{A} + \bar{C} + \bar{B})$

g) $(A + \bar{B} + C).(\bar{A} + C + B).(B + \bar{C} + A).(\bar{A} + \bar{C} + \bar{B})$

h) $(A + \bar{B} + C).(A + C + \bar{B}).(B + C + \bar{A}).(\bar{A} + C + \bar{B})$

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 ? (e)

What is the POS expression of the above truth table ? (f)