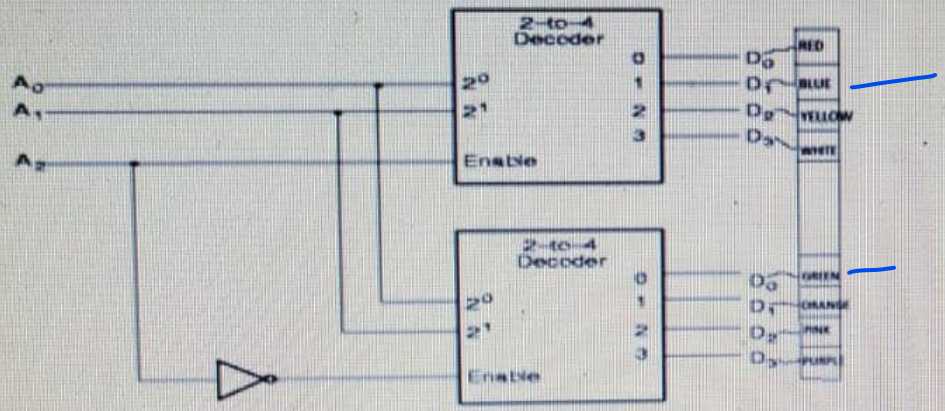
combinational circuits shows required input combination for a given change of state.

1 st usable IP address

Answer:

NAND or NOR is comprised with a combinational circuit and memory elements.

Following is the block diagram of a Combinational circuit which is made up of two 2-4 Decoders. Assume that each of the output lines of a Decoder is connected to a colored LED bulb as given in the diagram.




The functionality of the 2-4 decoder is given below.

| Inputs | | | Outputs | | | |
|---|---|---|---|---|---|---|
| A2 | A1 | A0 | D0 | D1 | D2 | D3 |
| 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 0 | X | X | 0 | 0 | 0 | 0 |

a. What are the input values that must be provided for A2, A1, A0 respectively, to have the BLUE light ON?

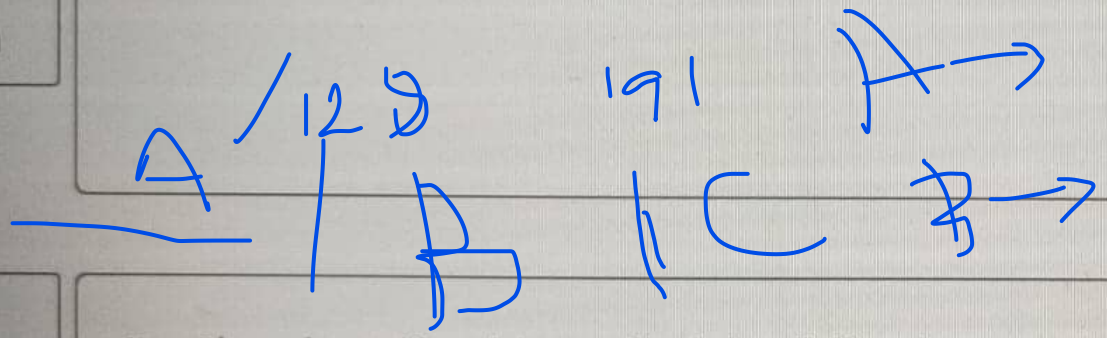
A2.A1.A0'
1 1 0

b. What are the input values that must be provided for A2, A1, A0 respectively, to have the GREEN light ON?

A2.A1'.A0'
1 0 0

24
answered
out of
question

LOGIC gates is comprised with a combinational circuit and memory elements.



broadcast = 174.16.255.255

25
answered
out of
question

For the given IP address find the following.

IP address: - 174.16.20.13

- Network address: 174 . 16 . 0 . 0
- Subnet mask: 255 . 255 . 0 . 0

first usable = 174.16.0.1

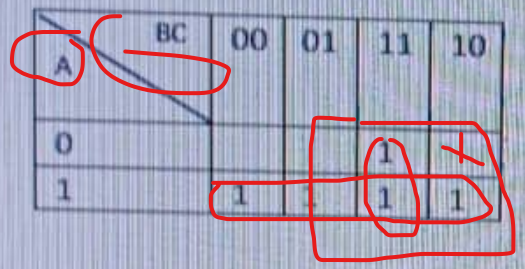
last usable = 174.16.255.254

no of users = 65,534 (2^16 -2)

ion 29
et answered
ed out of
ag question

Consider the following K-Map which is created considering the given output function F.

$F(A, B, C) = AB'C' + AB'C + ABC + ABC' + A'BC$



| A \ BC | 00 | 01 | 11 | 10 |
|---|---|---|---|---|
| 0 | | | 1 | 1 |
| 1 | 1 | 1 | 1 | 1 |

a. How many groups can you identify? 2

b. What is the simplified output expression according to the groups you identified? bc+a

c. Assuming A'BC' is a Don't Care condition, what is the simplified output expression? b+a

010

a.groups=2

b.BC+A

c

netexam.sliit.lk/mod/quiz/attempt.php?attempt=336262&cmid=4958&page=4

YouTube Maps Index of Money Hei... IP Subnet Calculator

# NetExam

Sri Lanka Institute of Information Technology

Examinations Lockdown Browser Practice Test

Consider the following K-Map which is created considering the given output function F

F (A, B, C) = A'B'C' + A'B'C + A'BC' + ABC'

| A \ BC | 00 | 01 | 11 | 10 |
|---|---|---|---|---|
| 0 | 1 | 1 | | 1 |
| 1 | | | | 1 |

a'+bc'

a. How many groups can you identify? 2

b. What is the simplified output expression according to the groups you identified? a'b' +bc'

c. Assuming A'BC is a Don't Care condition, what is the simplified output expression?

a) 2

b) BC'+A'B'

c)BC'+A'

ype here to search

Sri Lanka Institute of Information Technology

Dashboard Examinations Lockdown Browser Practice Test

it21307126 Nawarathne N.S.N it21

Question 28

Not yet answered

Marked out of 10.00

Flag question

One of your friends has come to you with following K-Map that he developed after carefully going through a Truth Table to represent input-output relationships of a real world problem with the aim of designing a combinational circuit.

| AB \ CD | 00 | 01 | 11 | 10 |
|---|---|---|---|---|
| 00 | 0 | 1 | 0 | 0 |
| 01 | 0 | 1 | 0 | 0 |
| 11 | 0 | 0 | 1 | 0 |
| 10 | 0 | 1 | 0 | 0 |

A. Write the minterm numbers that will be in the Boolean equation represented by the K-Map above. (Ex: use *m1* to represent *minterm 1*) m1 = A'B'C'D , m5 = A'BC'D , m9 =AB'C'D, m15 = ABCD

B. After carefully studying the problem again, you found out that it is not a problem even *minterms 3, 11,* and *13* being 0 or 1. By taking your new findings into consideration, simplify above K-map. Write the simplified Boolean equation in SoP form. (*Write $A\bar{B}C\bar{D}$ as AB'CD' in your answer. Don't keep spaces between letters*) S = c'd+ad

C. How many AND gates and OR gates are needed to implement this circuit.

i) AND: 2

ii) OR: 1

c' . d + a . d

OR

AND

Quiz navigati

Finish attempt ...

Time left 0:43:55

MCQ QUESTIONS (10

1 2 3 4

9 10 11 12

17 18 19 20

STRUCTURED QUESTIC

21 22 23 24

ESSAY QUESTION (1) (1

27

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ESSAY QUESTION (3) (10

29

| AB \ CD | | | | |
|---|---|---|---|---|
| | 0 | 1 | 0 | 0 |
| | 0 | 1 | 0 | 0 |
| | 0 | 0 | 1 | 0 |
| | 0 | 1 | 0 | 0 |

**A.** Write the minterm numbers that will be in the Boolean equation represented by the K-Map above. (Ex: use *m1* to represent *minterm 1*)

**B.** After carefully studying the problem again, you found out that it is not a problem even *minterms 3, 11,* and *13* being 0 or 1. By taking your new findings into consideration, simplify above K-map. Write the simplified Boolean equation in SoP form. (*Write $A\bar{B}C\bar{D}$ as AB'CD' in your answer. Don't keep spaces between letters*)

**C.** How many AND gates and OR gates are needed to implement this circuit.

**i)** AND:

**ii)** OR:

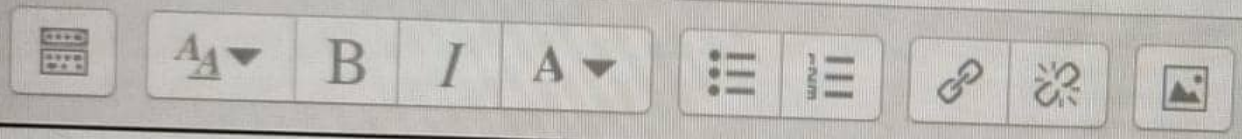
A) m1=A'B'C'D,m5=A'BC'D,m9=AB'C'D,m15=ABCD
B)S=C'D+AD
C) i) 2
ii) 1

| | | |
|---|---|---|
| | 0 | 0 |

a. What are the input values that must be provided for A2, A1, A0 respectively, to have the BLUE light ON?

b. What are the input values that must be provided for A2, A1, A0 respectively, to have the GREEN light ON?

c. If you need to have both the RED and GREEN lights ON, what is the modification you need to do to the above circuit?



a.) A2-1 A1-1 A0-0

b.)A2-1 A1-0A0-0

c.) Remove not gate

Question 28
Not yet answered
Marked out of 10.00
Flag question

One of your friends has come to you with following K-Map that he developed after carefully going through a Truth Table to represent input-output relationships of a real world problem with the aim of designing a combinational circuit.

| AB \ CD | 00 | 01 | 11 | 10 |
|---|---|---|---|---|
| 00 | 0 | 0 | 0 | 0 |
| 01 | 1 | 0 | 0 | 1 |
| 11 | 1 | 0 | 1 | 0 |
| 10 | 0 | 0 | 0 | 0 |

**A.** Write the minterm numbers that will be in the Boolean equation represented by the K-Map above. (Ex: use *m1* to represent *minterm 1*) m4 = A'BC'D' , m6= A'BCD' , m12 = ABC'D', m15= ABCD

**B.** After carefully studying the problem again, you found out that it is not a problem even *minterms 5, 13,* and *14* being 0 or 1. By taking your new findings into consideration, simplify above K-map. Write the simplified Boolean equation in SoP form. (*Write $A\bar{B}C\bar{D}$ as AB'CD' in your answer. Don't keep spaces between letters*) s = BD' +AB

**C.** How many AND gates and OR gates are needed to implement this circuit.

i) AND: 2

ii) OR: 1

to the above circuit?

...both the RED and GREEN lights ON, what is the modification you need to do ...respectively, to have the GREEN

a. A2 -1
A1 -1
A0 -0

b. A2 -0
A1 -0
A0 -0

c. Remove the NOT gate on the circuit

Sri Lanka Institute of Information Technology

Examinations Lockdown Browser Practice Test

wered
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stion

Broadcast address

Answer:

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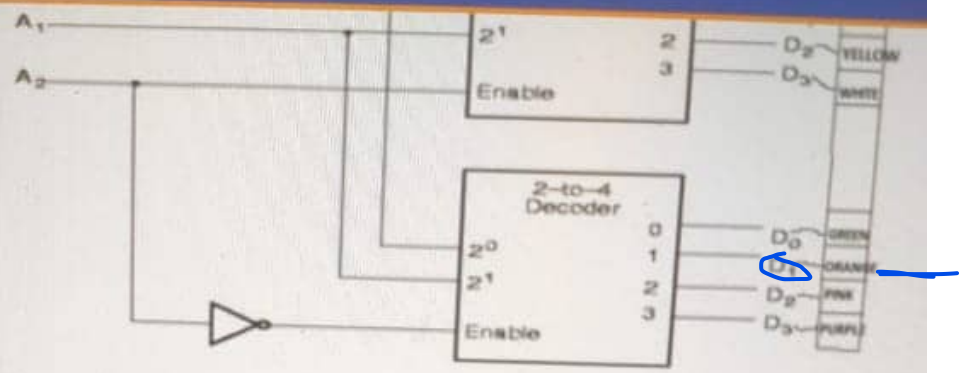
of
estion

Complete the missing parts of the binary form of following IPv4 address:

IPv4 Address: 173.18.10.253

- IPv4 Address in Binary: 10101101 . 00010010 . 00001010 . 11111101
- IP Address Class: B




The functionality of the 2-4 decoder is given below.

| Inputs | | | Outputs | | | |
|---|---|---|---|---|---|---|
| A2 | A1 | A0 | D0 | D1 | D2 | D3 |
| 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 0 | X | X | 0 | 0 | 0 | 0 |

a. What are the input values that must be provided for A2, A1, A0 respectively, to have the ORANGE light ON?

b. What are the input values that must be provided for A2, A1, A0 respectively, to have the RE light ON?

c. If you need to have both the BLUE and ORANGE lights ON, what is the modification you nee do to the above circuit?

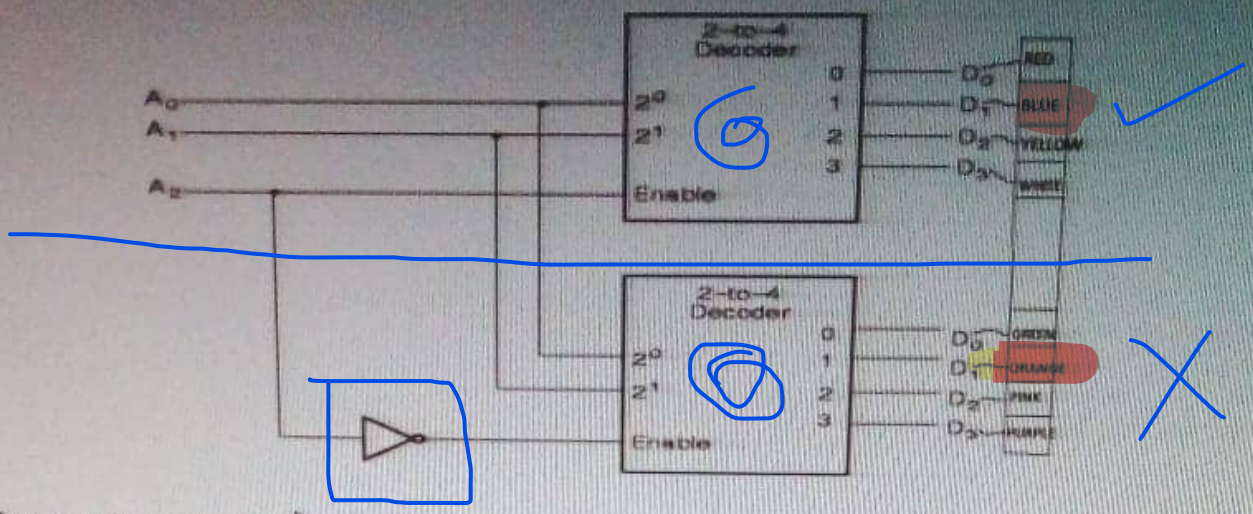
a) A2=0,A1=0,A0=1

b)A2=1,A1=0,A0=0

c) remove the not gate which is connected in to A2

here to search

Following is the block diagram of a Combinational circuit which is made up of two 2-4 Decoders. Assume that each of the output lines of a Decoder is connected to a colored LED bulb as given in the diagram.




The functionality of the 2-4 decoder is given below.

| Inputs | | | Outputs | | | |
|---|---|---|---|---|---|---|
| A2 | A1 | A0 | D0 | D1 | D2 | D3 |
| 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 0 | X | X | 0 | 0 | 0 | 0 |

a. What are the input values that must be provided for A2, A1, A0 respectively, to have the ORANGE light ON?

A2=1
A1=1
A0=0
A2.A1.A0'

b. What are the input values that must be provided for A2, A1, A0 respectively, to have the RED light ON?

AA2=1
A1=0
A0=0
A2.A1'.A0'

c. If you need to have both the BLUE and ORANGE lights ON, what is the modification you need to do to the above circuit?

here to search

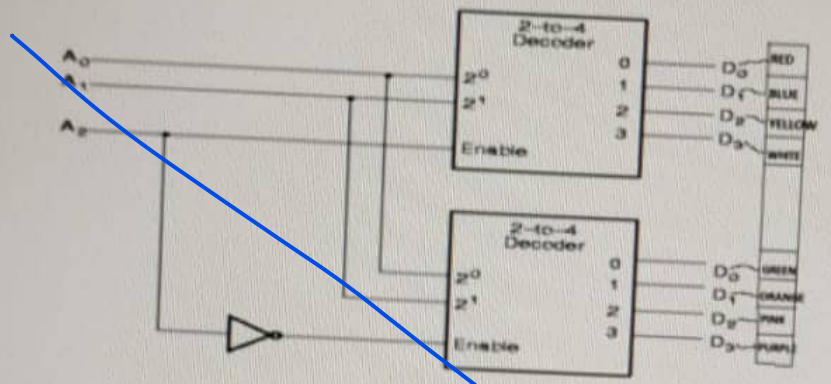
Question 27

Not yet answered

Marked out of 10.00

Flag question

Following is the block diagram of a Combinational circuit which is made up of two 2-4 Decoders. Assume that each of the output lines of a Decoder is connected to a colored LED bulb as given in the diagram.




The functionality of the 2-4 decoder is given below.

| Inputs | | | Outputs | | | |
|---|---|---|---|---|---|---|
| A2 | A1 | A0 | D0 | D1 | D2 | D3 |
| 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 1 | 1 | 0 | 0 | 1 | 0 | 0 |
| 1 | 0 | 1 | 0 | 0 | 1 | 0 |
| 1 | 1 | 1 | 0 | 0 | 0 | 1 |
| 0 | X | X | 0 | 0 | 0 | 0 |

a. What are the input values that must be provided for A2, A1, A0 respectively, to have the BLUE light ON?

b. What are the input values that must be provided for A2, A1, A0 respectively, to have the GREEN light ON?

c. If you need to have both the RED and GREEN lights ON, what is the modification you need to do to the above circuit?

e. IP Address is a physical Address

estion 12

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Flag question

Match the correct Security Term to given Courseweb scenarios.

A log file keeps a record on what time a student submitted a file to Courseweb.

Lecturers are allowed to delete files in Courseweb but Students Can only view the file.

Using a username and password to login to Courseweb

Choose...

Choose...

Authoriza

Accountir

Authentic

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yet answered

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Flag question

Select the correct statement about hubs.

Select one:

None of the given statements are true.

18

answered

out of

question

Which of the following is not a benefit of the layered networking model?

Select one:

- a. Changes in one layer do not affect other layers
- b. Provides a common language
- c. Create a competition between vendors
- d. Allows one organization to control the protocol design
- e. Assists in protocol design

ion 19

et answered

ed out of

lag question

Which of the following is not a responsibility of the Data Link layer?

Select one:

- a. Physical addressing (MAC address)
- b. Access control
- c. Flow control
- d. Routing
- e. Framing – Ethernet frame

estion 20

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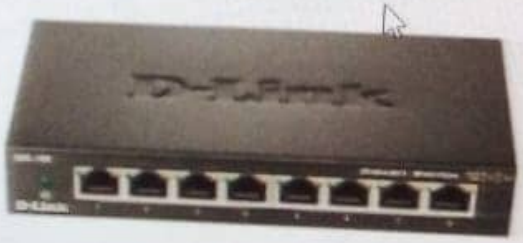
Flag question

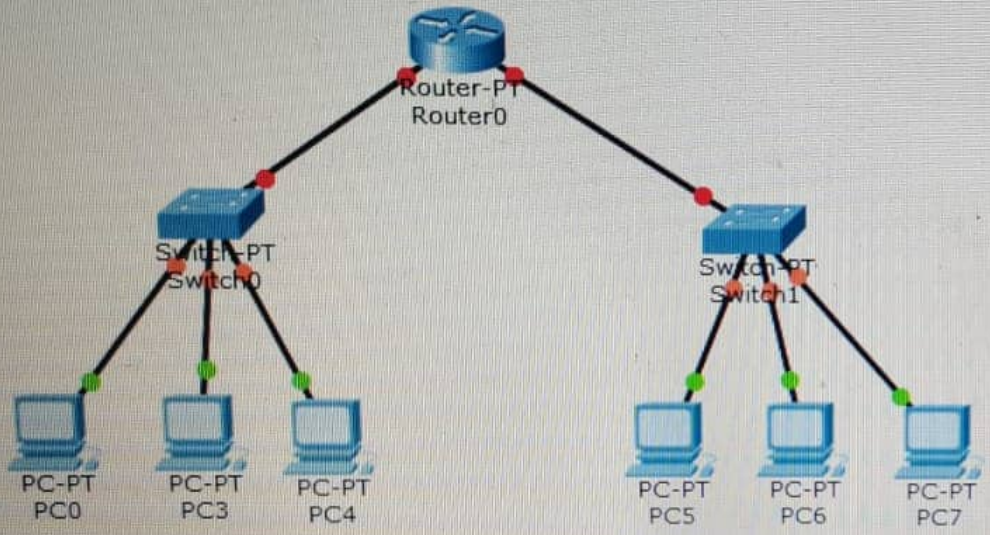
Which of the following statement is true regarding the given figure?



Switch

Type here to search

Which of the following statements describe the network shown in the graphic? (Select two)




Select one or more:

- [ ] There are total number of four collision domains in the network.
- [ ] There are total number of six broadcast domains in the network.
- [x] There are total number of two broadcast domains in the network.
- [ ] There are total number of eight collision domains in the network.
- [x] There are total number of seven collision domains in the network.
- [ ] There are total number of four broadcast domains in the network.

7.

- Router
- Firewall
- Switch
- Hub

Match the correct Security Term to given Courseweb scenarios.

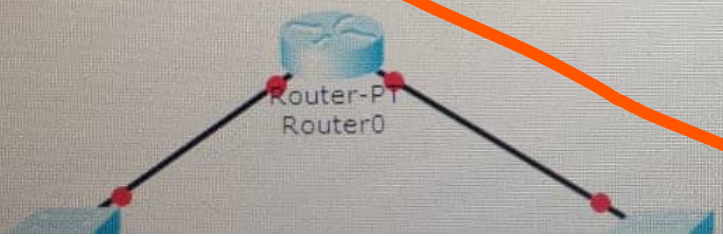
A log file keeps a record on what time a student submitted a file to Courseweb. Choose...

Lecturers are allowed to delete files in Courseweb but Students Can only view the file.

Using a username and password to login to Courseweb

Choose...
Choose...
Authentication
Accounting
Authorization

Which of the following statements describe the network shown in the graphic? (Select two)



e. Framing - Ethernet frame

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uestion

Which of the following statement is true regarding the given figure?

Repeater

Hub

Select one:

a. These devices are used to build a LAN

b. These devices are used to build a PAN

c. These devices cannot be used to create a network

d. These devices are used to connect multiple networks

Type here to search

b. Provides a common language

c. Allows one [redacted] control the protocol design

d. Assists in protocol design

e. Changes in one layer do not affect other layers

uestion 10

Not yet answered

Marked out of 0.50

Flag question

Coaxial cables are widely used in applications such as;

Select one:

- Computer communication.
- Television distribution.
- Microwave communication.
- Satellite communication.
- None of the mentioned is true.

Qu 11

Which of the following statement is true?

Question 26

Not yet answered

Marked out of 1.00

Flag question

A semiconductor memory cell is fabricated with [ ] .

transistors(one to several transistors)

ervice Attack (DoS) using ping command

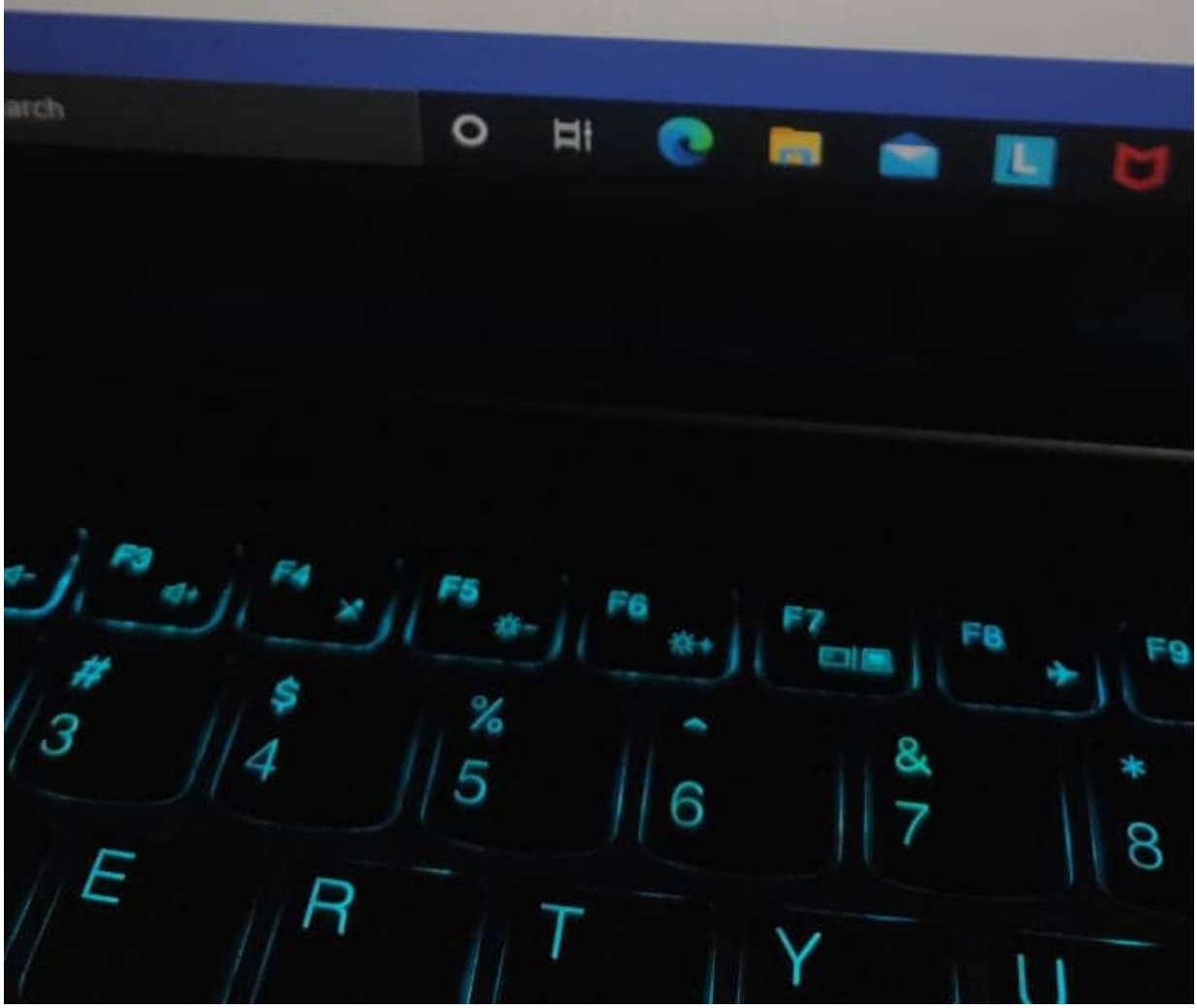
program att ed to another program to execute a particular u

correct port category d iption to port numbers.

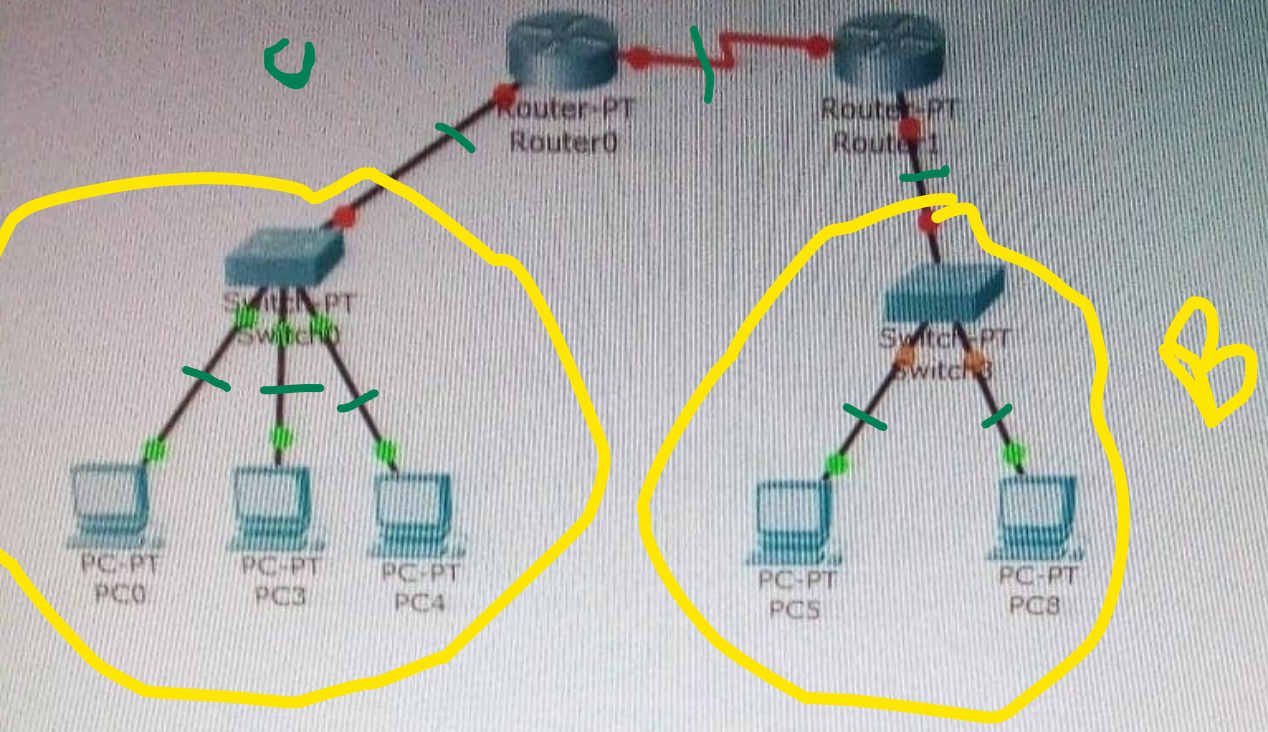
ed port numbers 102 49151

own port numbers 0 to 1023

ic/Private port numbers 49152 to 6553



hich of the following statements describe the network shown in the graphic? (Select two)




Select one or more:

- [ ] There are total number of three broadcast domains in the network.
- [x] There are total number of two broadcast domains in the network.
- [ ] There are total number of four broadcast domains in the network.
- [ ] There are total number of seven collision domains in the network.
- [ ] There are total number of four collision domains in the network.
- [x] There are total number of eight collision domains in the network.

Which of the following is not a benefit of the layered networking model?

Select one:

- a. Changes in one layer do not affect other layers
- b. Provides a common language

ere to search

○ None of the mentioned is true.

○ Computer communication.

Question 16

Not yet answered

Marked out of 0.50

Flag question

Match the given addresses to appropriate network addressing term.

| | | |
|---|---|---|
| 172.16.10.9 | IPV4 Address | Choose... |
| 2001:db8:85a3::8a2e:370:7334 | IPV6 Address | Choose... |
| 255.255.255.0 | Class C subnet mask | Choose... |
| 34-F3-9A-36-68-BB | MAC address | Choose... |
| 255.0.0.0 | Class A Subnet mask | Choose... |

Choose...
IPv4 Address
IPv6 Address
Class A Subnet Mask
Class C Subnet Mask
MAC Address

Question 17

Not yet answered

Marked out of 0.50

An attacker trying to manipulate [illegible] actions or divulging confidential information [illegible] as Social Engineering.

Select one:

Converged networks carry social networking data.

n 16
t answered
d out of
g question

Match the given address to the correct address type.

| | |
|---|---|
| FE80:CD00:0000:0CDE:1257:0000:211E:729C | IPv6 Address |
| 203.147.23.20 | IPv4 Address |
| 00:1B:44:11:3A:B7 | MAC Address |

tion 17

None of the mentioned is true.

Question 11

Not yet answered

Marked out of 0.50

Flag question

Which of the following statement is true?

Select one:

- a. IP Address is a physical Address and MAC Address is a logical Address
- b. IP Address is a logical Address and MAC Address is a physical Address
- c. MAC Address is logical address
- d. Both IP and MAC addresses are virtual addresses
- e. IP Address is a physical Address

Question 12

Not yet answered

Marked out of 0.50

Flag question

Match the correct Security Term [illegible]ven Courseweb scenarios.

A log file keeps a record on what time a [illegible]ent submitted a file to Courseweb. Choose...

Lecturers are allowed to delete files in Coursew[illegible] but Students Can only view the file. Choose...

Using a username and password to login to Cours[illegible]b Choose...

Question 13

Select the correct statement about hubs.

Match the given addresses to appropriate network addressing term.

| | |
|---|---|
| 255.0.0.0 | Class A Subnet Mask |
| 34-F3-9A-36-68-BB | MAC Address |
| 2001:db8:85a3::8a2e:370:7334 | IPv6 Address |
| 255.255.255.0 | Class C Subnet Mask |
| 172.16.10.9 | IPv4 Address |

Which of the following is not a benefit of the layered networking model?

Select one:

- a. Provides a common language
- b. Changes in one layer do not affect other layers
- c. Allows one organization to control the protocol design
- d. Create a competition between vendors
- e. Assists in protocol design