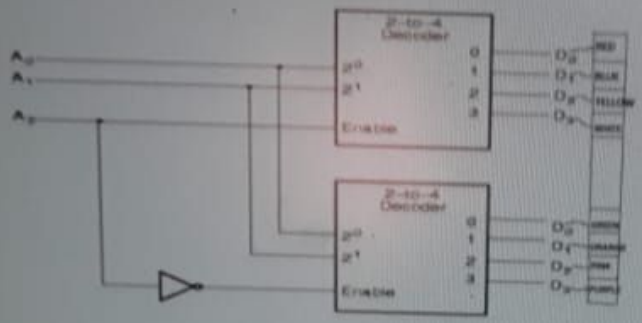
A semiconductor memory cell is fabricated with

Flag question



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?

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

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

c) Remove the NOT gate

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NetExam

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xaminations Lockdown Browser Practice Test

Suppose that there are some instructions (16 bits) are loaded in memory as follows. The memory addresses are given in hexadecimal values and the current PC value is set as 351.

address	instruction
350	1942
351	2945
352	5947
353	1950
354	3951

Most significant four bits indicate the opcode and other bits represent the operand reference. What are the memory addresses of above instructions pointing at to fetch instruction/data ()?

[ ] is comprised with a combinational circuit and memory elements.

What is the subnet mask of the following IP address?

IP address: - 179.11.120.4

Write your answer in dotted decimal format (e.g. 192.168.10.1)

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				
	0	1	0	0
	0	0	0	0
	1	1	0	0
	1	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*)

B. After carefully studying the problem again, you found out that it is not a problem even *minterms 4, 5,* and 9 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:

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Final Examination

Lanka Institute of Information Technology

aminations Lockdown Browser Practice Test

Suppose that there are some instructions that are loaded in memory as follows.

address	instruction
350	1942
351	2945
352	5947
353	1950
354	3951
355	4952

Assuming that instructions are executed sequentially and the current PC value is set as 351, write the content of the Program Counter (PC) and Instruction Register (IR) values at each step of execution.

B I A

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)

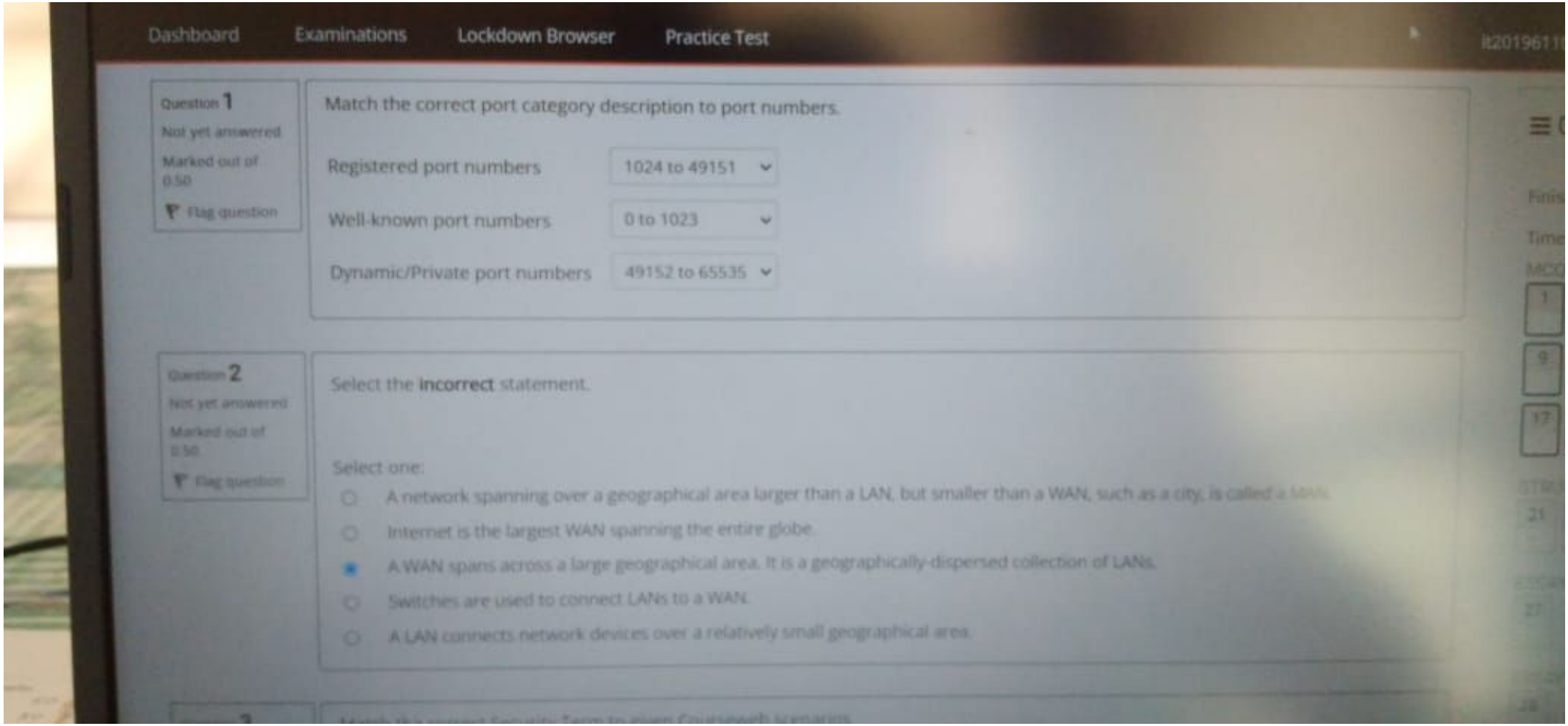
B. After carefully studying the problem again, you found out that it is not a problem even *minterms* 5, 13, and 14 being 0 or 1. By taking your new findings into consideration, simplify above K-map. Write the simplified Boolean equation in SoP form. (*Write $A\bar{B}C\bar{D}$ as AB'CD' in your answer.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

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

i) AND:

ii) OR:

A.)
B) ABCD+A'BD'+BC'D'
C) AND- 3
OR- 1


Dashboard
Examinations
Lockdown Browser
Practice Test
Question 1
Not yet answered
Marked out of 0.50
Flag question
Match the correct port category description to port numbers.
Registered port numbers
1024 to 49151
Well-known port numbers
0 to 1023
Dynamic/Private port numbers
49152 to 65535
Question 2
Not yet answered
Marked out of 0.50
Flag question
Select the incorrect statement.
Select one:
A network spanning over a geographical area larger than a LAN, but smaller than a WAN, such as a city, is called a MAN.
Internet is the largest WAN spanning the entire globe.
A WAN spans across a large geographical area. It is a geographically-dispersed collection of LANs.
Switches are used to connect LANs to a WAN.
A LAN connects network devices over a relatively small geographical area.

29
nswered
out of
question

Suppose that there are some instructions that are lo

address	instruction
350	1942
351	2945
352	5947
353	1950
354	3951
355	4952

Assuming that instructions are executed sequentially a
content of the Program Counter (PC) and Instruction Re

PC-351 IR-1942
PC-352 IR-2945
PC-353 IR-5947
PC-354 IR-1950
PC-355 IR-3951

Type here to search

A LAN connects network devices over a relatively small geographical area.

Question 3
Not yet answered
Marked out of 0.50
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. — Accounting

Using a username and password to login to Courseweb — Authorization

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

Question 4
Not yet answered
Marked out of 0.50
Flag question

Match the description with the appropriate ISO-OSI Layer

Provide reliable process to process message delivery — Transport Layer

Organizes bits into frames which helps hop-to-hop delivery — Choose...

Translate, Encrypt & Compress Data — Choose...

Allows users to access network resources — Choose...

Question 5

What is the correct decimal representation of the following IPv4 address?

ESSAY QUE 28

ESSAY QUE 29

FEEDBACK 30

n 2
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question

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

Select one:

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

on 3

Dashboard Examinations Lockdown Browser Practice Test

Question 5

Not yet answered

Marked out of 0.50

Flag question

What is the correct decimal representation of the following IPv4 address?

11000000.10101000.00001010.00001011

Select one:

- a. 192.128.0.11
- b. 192.168.10.11
- c. 192.168.10.1
- d. 172.11.10.11
- e. 192.148.0.11

Question 6

Not yet answered

Marked out of 0.50

Flag question

Coaxial cables are widely used in applications such as,

Select one:

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

Match the correct Security Term to given Courseweb scenarios.

Using a username and password to login to Courseweb	Authentication
Lecturers are allowed to delete files in Courseweb but Students Can only view the file.	Authorization
A log file keeps a record on what time a student submitted a file to Courseweb.	Accounting

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

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Dashboard Examinations Lockdown Browser Practice Test

Not yet answered

Marked out of 0.50

Flag question

Select one:

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

Question 7

Not yet answered

Select the correct statements about network characteristics. (Select two)

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Flag question

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

Select one:

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

Question 5

Not yet answered

Marked out of
0.50

What is the correct decimal representation of the following IPv4 address?

11000000.10101000.00001010.00001011

- (selected) One signal getting mixed up with another signal.
- Loss of signal strength.

Question 7

Not yet answered

Marked out of 0.50

Flag question

What are the correct statements about "MAC address table"? (select two)

Select one or more:

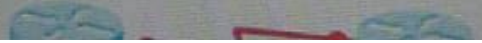
- [ ] MAC address table is used by switches
- [ ] None of the given answers are true
- [x] MAC address table is used by routers
- [ ] MAC address table is a collection of MAC addresses with the respective connected ports
- [x] MAC address table is created for each computer

Question 8

Not yet answered

Marked out of 0.50

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



- The internet is owned by Internet Society (ISOC).
- The protocols related to the Internet is defined by IETF and IRTF

What is a main difference between a Switch and a Bridge?

Select one:

- There is no difference.
- Bridge is a dumb device while switch is an intelligent device.
- Switch is large and a bridge is small.
- Bridge is used to segment a LAN while Switch is used to interconnect different LANs.
- A bridge is used to connect LANs whereas a switch is used to create a LAN

Select the correct statements about Dial up connection. (Select two)

Select the statement which is not true.

Select one:

- The internet architecture standards are defined by Internet Architecture Board.
- The internet is a public network.
- The internet is defined as a global mesh of interconnected networks.
- The internet is owned by Internet Society (ISOC).
- The protocols related to the Internet is defined by IETF and IRTF

What is a main difference between a Switch and a Bridge?

Select one:

- There is no difference.

...network layer affects entire communication

What is "Attenuation" in a data transmission medium?

Select one:

- None of the mentioned is true.
- Loss of signal strength.
- An unwanted signal component.
- One signal getting mixed up with another signal.
- Reflecting of a signal at an interface.

Select the correct statement.

- [ ] Digital service.
- [ ] Has a fixed monthly rental.

11

What is the correct statement about a Broadcast Domain?

Select one:

- A collection of two or more computers in which, when one sender sends a message, it is received by one receiver in the same domain.
- A collection of two or more computers in which, when one sender sends a message, it is received by a group of computers in the same domain.
- A collection of two or more computers in which, when one sender sends a message, it is received by all the others in the same domain.
- A collection of two or more computers in which, when one sender sends a message, it is received by all the others in a different domains.
- None of the mentioned is true.

12

Which of the following statements is correct?

Select one:

- a. A failure in Network layer stops the device from working entirely

Question 18

Not yet answered

Marked out of 0.50

Flag question

ADSL is the abbreviation of,

Select one:

- None of the mentioned is true.
- Asymmetric Digital Subscriber Line
- Asymmetric Dual System Line
- Asymmetric Dual Subscriber Line
- Asymmetric Digital System Line

Question 19

Not yet answered

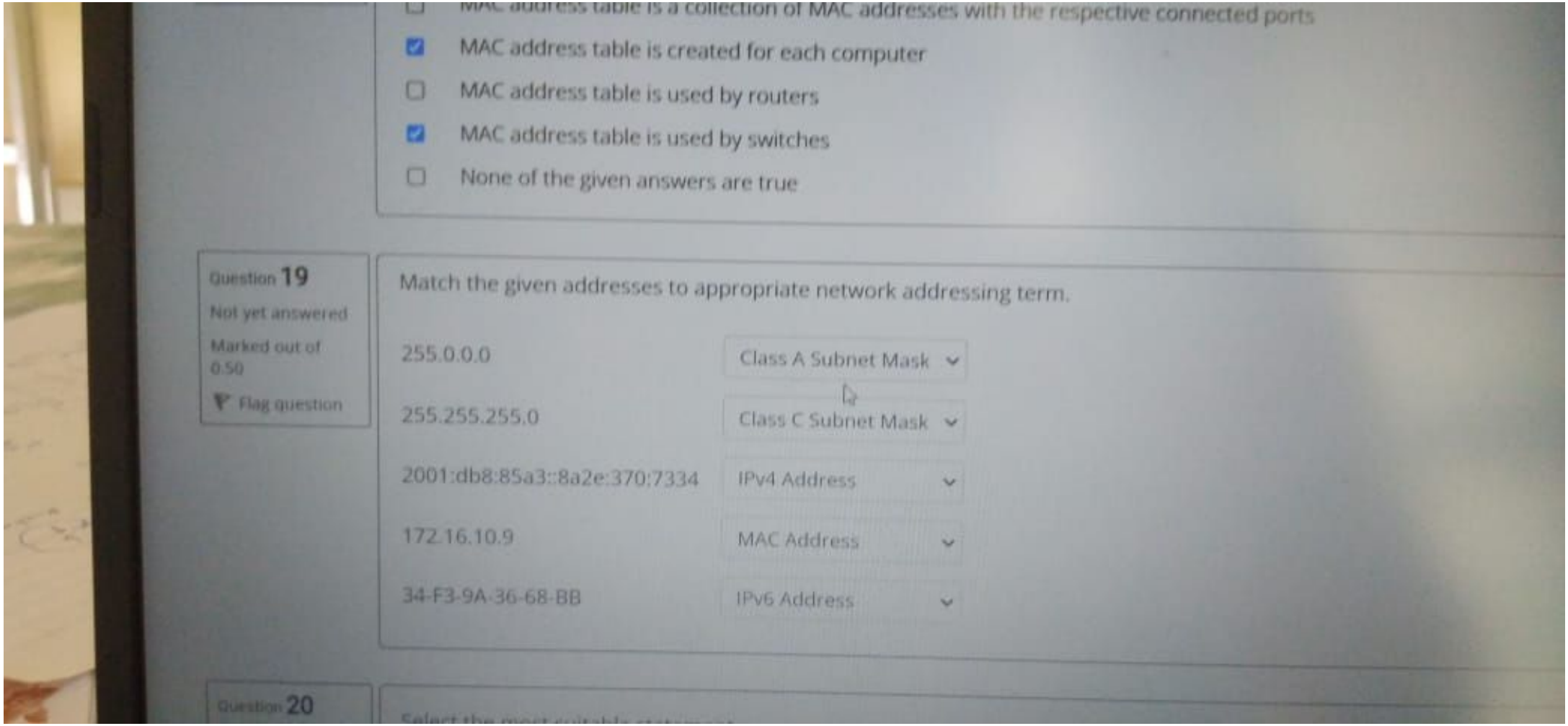
Marked out of 0.50

Flag question

What is **not** an advantage of a computer network?

Select one:

- User Communication
- Social Engineering
- Interaction among cooperative application programs
- Remote Information Access
- Resource Sharing


MAC address table is a collection of MAC addresses with the respective connected ports
MAC address table is created for each computer
MAC address table is used by routers
MAC address table is used by switches
None of the given answers are true
Question 19
Not yet answered
Marked out of 0.50
Flag question
Match the given addresses to appropriate network addressing term.
255.0.0.0
Class A Subnet Mask
255.255.255.0
Class C Subnet Mask
2001:db8:85a3::8a2e:370:7334
IPv4 Address
172.16.10.9
MAC Address
34-F3-9A-36-68-BB
IPv6 Address
Question 20

Marked out of 0.50

Flag question

Select one:

- 10 Gigabit Ethernet
- Token ring
- Virtual Private Network
- Ethernet
- Fast Ethernet

Question 12

Not yet answered

Marked out of 0.50

Flag question

Select the correct elements/components that make up a network.

Select one:

- Service, Medium, Packet, Rules.
- Service, Medium, Packet, Protocols.
- Device, Wire, Message, Rules.
- Device, Medium, Message, Rules.
- Device, Medium, Message, Protocols.

Dynamic/Private port numbers 49152 to 65535

Question 18

Not yet answered

Marked out of 0.50

Flag question

What are the correct statements about "MAC address table"? (select two)

Select one or more:

- [ ] MAC address table is a collection of MAC addresses with the respective connected ports
- [x] MAC address table is created for each computer
- [ ] MAC address table is used by routers
- [x] MAC address table is used by switches
- [ ] None of the given answers are true

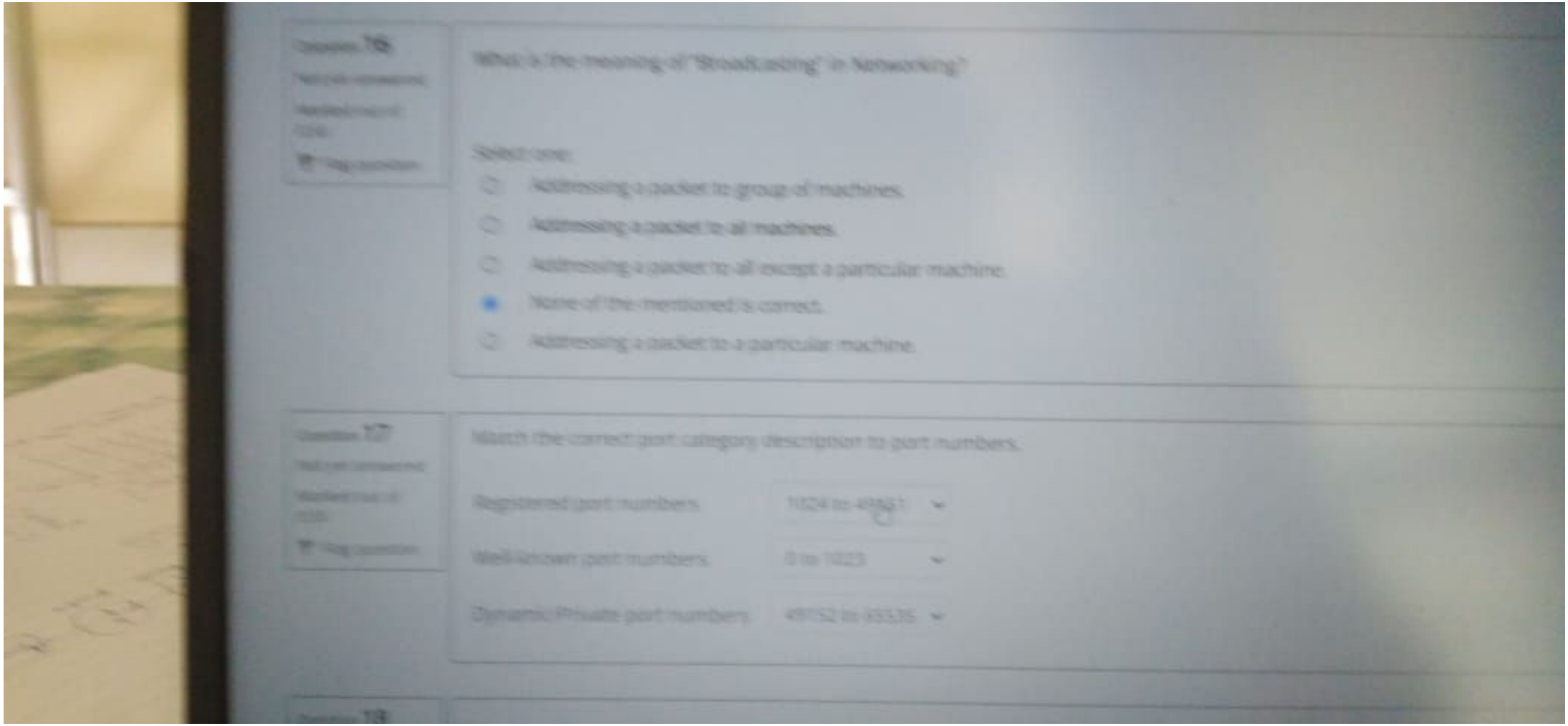
Question 19

Not yet answered

Marked out of

Match the given addresses to appropriate network addressing term.

255.0.0.0 Class A Subnet Mask



Question 23

Not yet answered

Marked out of 3.00

Flag question

For the given IP address find the following.

IP address: - 172.18.10.1

- Network address: 172 . 18 . 10 . 0
- Subnet mask: 255 . 255 . 255 . 252
- Broadcast address: 172 . 18 . 10 . 3
- Last usable IP address: 172 . 18 . 10 . 255

Question 24

Not yet answered

Marked out of 2.00

Flag question

What is the subnet mask of the following IP address?

IP address: - 192.168.105.4

Write your answer in dotted decimal format

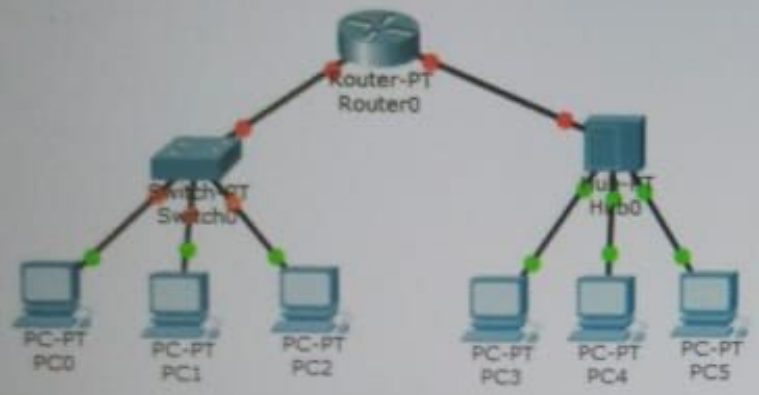
Question 15

Not yet answered

Marked out of 0.50

Flag question

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



Select one or more:

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

Examinations Lockdown Browser Practice Test

Multiplexer is a combinational circuit that can be used for data routing and parallel to serial conversion.

22

shows required input combination for a given change of state.

23

For the given IP address find the following

4

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What is the subnet mask of the following IP address?

IP address: - 192.168.105.4

Write your answer in dotted decimal format (e.g. 192.168.10.1)

Answer: 255.255.255.0

25

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uestion

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

26

Program is

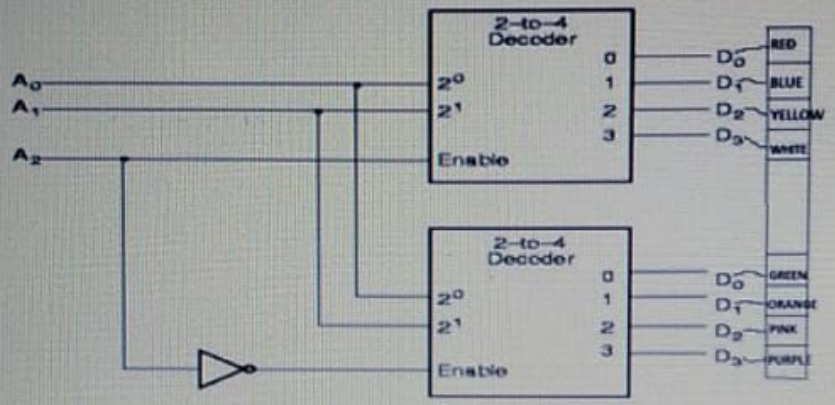
Question 27

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 ORANGE light ON?

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

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?

tion 23
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ked out of
Flag question

For the given IP address find the following.

IP address: - 193.169.168.2

- Network address: 193 . 169 . 168 . 2
- Subnet mask: 255 . 255 . 255 . 0
- Broadcast address: 193 . 169 . 168 . 2
- 1st usable IP address: 193 . 169 . 168 . 2
- Last usable IP address: 193 . 169 . 168 . 254
- IP Address Class: c (Only type the Letter)

29
nswered
out of
question

Suppose that there are some instructions that are lo

address	instruction
350	1942
351	2945
352	5947
353	1950
354	3951
355	4952

Assuming that instructions are executed sequentially a
content of the Program Counter (PC) and Instruction Re

PC-351 IR-1942
PC-352 IR-2945
PC-353 IR-5947
PC-354 IR-1950
PC-355 IR-3951

Type here to search

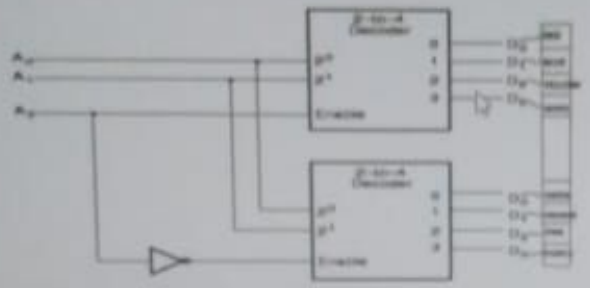
Question 27

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?

Question 29

Not yet answered

Marked out of 10.00

Flag question

Suppose that there are some instructions (16 bits) are loaded in memory as follows. The memory addresses are given in hexadecimal values and the current PC value is set as 351.

address	instruction
350	1942
351	2945
352	5947
353	1950
354	3951

Most significant four bits indicate the opcode and other bits represent the operand reference. What are the memory addresses of above instructions pointing at to fetch instruction/data ()?

- Last usable IP address: 193 . 169 . 168 . 254

- IP Address Class: c (Only type the Letter)

Question 24

Not yet answered

Marked out of 2.00

Flag question

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

IPv4 Address: 198.168.10.1

- IPv4 Address in Binary: 011000110 . 010101000 . 00001010 . 00000001
- How Many Hosts Can be Connected this Network:

Question 25

Not yet answered

Marked out of 1.00

Flag question

transfer data/instruction to and from CPU.

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