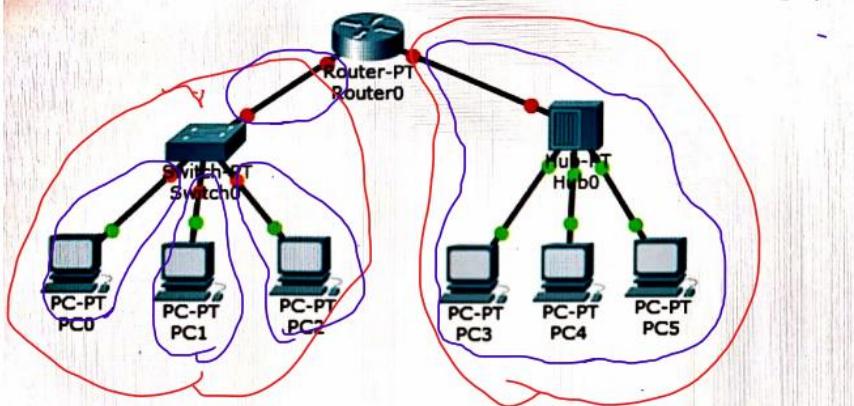


Which of the following statements describe the network shown in the graphic? (Select two)



Select one or more:

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

Scanned with CamScanner

Question 2

Not yet answered  
Marked out of .50

? Flag question

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

Select one or more:

- Digital service. ✗
- Has a fixed monthly rental. ✗
- Provides low speed.
- Each service is billed separately.
- Doesn't provide a continuous connection. Need to dial up to connect.

**Question 3**

Not yet answered  
Marked out of 0.50

Flag question

Match the given address to the correct address type.

00:1B:44:11:3A:B7

MAC

Choose... ▾

203.147.23.20

IPv4

Choose... ▾

FE80:CD00:0000:0CDE:1257:0000:211E:729C

Choose... ▾

IPv6

**Question 4**

Which of the following statement is incorrect regarding the 'Internet'?



Match the ISO-OSI Layer to correct address type used in Network Communications.

Network Layer

Choose... ▾

Data Link Layer

Choose... ▾

Transport Layer

Port Address  
MAC Address  
Web Address  
IP Address  
Registry Address

**Question 6**

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.

Choose... ▾

Choose... ▾

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

Accounting

Authorization

Authentication

Using a username and password to login to Courseweb

of  
question

Select one or more:

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

Marked out of 0.50

Flag question

Time spent 1m 1s

Question 2

Not yet answered

Marked out of 0.50

Flag question

Which of the following statements are true? (select two).

Select one or more:

- A multipoint connection is a connection established between more than two devices.
- Point to point connection is always build using a wireless media.
- Point to point connection is always build using a copper cable.
- Point-to-Point connection provides a dedicated link between the two devices.
- Multi-point connection is always build using a wireless media.

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\_\_\_\_\_ refers to the physical or logical arrangement of a network.

Select one:

- 
- 
- 
- Topology
-

Question 5  
Not yet answered  
Marked out of 0.50  
Flag question

Question 6  
Not yet answered  
Marked out of 0.50  
Flag question

Examinations Lockdown Browser Practice Test netexam.slit.lk

A Denial of Service Attack (DoS) using ping command

Lots of traffic causing floods and damaging the data center

A Malware program attached to another program to execute a particular unwanted function on a workstation

Which of the following statement is incorrect regarding the 'Internet'?  
Select one:

- a. Internet is the largest WAN topology
- b. Internet is governed by International Standardization Organization (ISO)
- c. Internet is a collection of interconnected networks
- d. Internet protocols are managed by IETF

In a regular network, which of the following can be a Software?  
Select one:  
Router  
Hub  
Modem  
Switch  
Firewall

Internet Corporation for Assigned Names and Numbers (ICANN)

Network Security Threat  
Physical Security Threat  
Application Security Threat

## What does a Protocol define?

Select one:

- Protocol defines how data is communicated.
- Protocol defines what data is communicated.
- Protocol defines why data is communicated
- Protocol defines when data is communicated.
- None of the mentioned is true.

ADSL is the abbreviation of.

Select one:

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

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

11000000.10101000.00001010.00001011

Select one:

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

$128 + 64 + 32 + 16 + 8 + 4 + 2 + 1$   
\*Add the positions related to one  
for each 8 bit set.

on 19

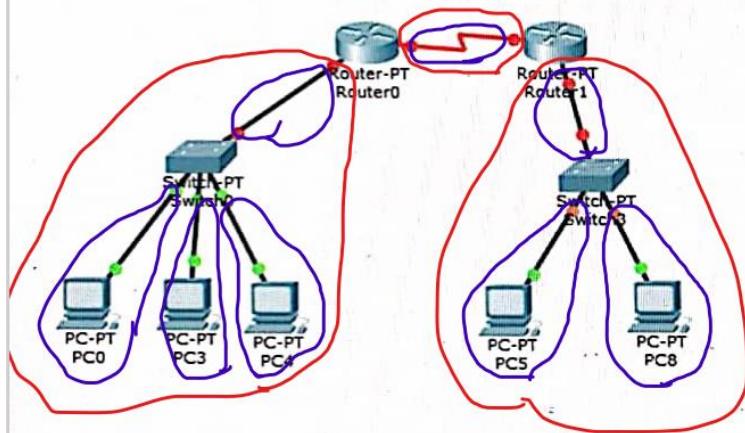
Answered  
1 out of  
1 question

Which of the following is NOT a correct statement regarding Firewalls?

Select one:

- a. URL Filtering is a method used in Firewalls
- b. Packet Filtering is a method used in Firewalls
- c. A firewall controls traffic and helps prevent unauthorized access
- d. A Firewall resides between two or more networks
- e. Firewall can provide 100% security to a network

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

Scanned with CamScanner

**Question 21**

Not yet answered

Marked out of  
1.00

Flag question

The difference between memory and storage is that the memory is  and storage is permanent.

## Quiz

Finish after

Time left 1:

MCQ QUES

1	2
8	9
15	16
21	22

STRUCTURE

21	22
----	----

ESSAY QUES

27
----

ESSAY QUES

28
----

**Question 22**

Not yet answered

Marked out of  
1.00

Flag question

**Sequential Circuit** is an electronic circuit having a combinational circuit with a memory.

**Question 23**

Not yet answered

Marked out of  
1.00

Flag question

**Instruction Set** provides commands to the processor.

Match the correct port category description to port numbers.

Registered port numbers

Dynamic/Private port numbers

Well-known port numbers

Devices on one network can communicate with devices on another network via. (Select two)

Select one or more:

- Hub
- Multiplexer
- Router
- Printer
- Gateway

Which of the following are not networking devices? (Select two)

Select one or more:

- Switch
- Linux
- Gateway
- ALU
- Router

Which of the following statement is true?

Select one:

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



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

Select one:

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



Select the correct statement about hubs.

Select one:

- Hub always unicast messages.
- Hub always broadcast messages.
- Hub functions are similar to switch.
- Hub maintains a MAC table for data forwarding
- None of the given statements are true.

Which characteristic is not addressed by a network architecture design.

Select one:

- Quality of Service.
- Durability.
- Fault Tolerance.
- Scalability.
- Security.

Coaxial cables are widely used in applications such as,

Select one:

- None of the mentioned is true.
- Microwave communication.
- Television distribution.
- Computer communication. - RJ45
- Satellite communication.

Optical fibers operate based on an optical phenomena known as,

Select one:

- Total signal reflection.
- Total external reflection.
- Total reflection.
- None of the mentioned is true.
- Total internal reflection.

Copper cables are one of the most popular wired transmission medium because,

Select one:

- It uses differential signaling for signal transmission.
- There are multiple number of cables.
- It is less costly in maintenance and installation. 
- Copper cables can bend in any direction.
- It is the only guided medium available.

Match the ISO-OSI Layer to correct address type used in Network Communications.

Transport Layer	Port Address	✓
Network Layer	IP Address	✓
Data Link Layer	MAC Address	✓

What is not an advantage of a computer network?

Select one:

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

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

Select one or more:

- The logical topology is the arrangement of cables, network devices, and end systems.
- Reliability indicates the non-dependability of the components that make up the network.
- Scalability indicates how many nodes are currently on the network.
- Availability is a measure of the probability that the network will be available for use when it is required.
- The data rate is measured by bits per second of a given link in the network.

3  
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Which of the following factors is not considered when selecting intermediate devices?

Select one:

- a. Weight (portability) of the device
- b. Number of Ports
- c. Device Speed
- d. Cost
- e. Manageability of the Device

4  
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ut of  
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A television broadcast is an example of \_\_\_\_\_ transmission

Select one:

- None of the given answers are correct.
- Full duplex
- Simplex
- Automatic
- Half duplex

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 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 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 a different domains.
- None of the mentioned is true.

**Which of the following are NOT real time application scenarios? (Select Two)**

Select one or more:

- a. Facebook live video
- b. Skype Video Conference
- c. Zoom live webinar
- d. Downloading an email attachment from an Email App
- e. Downloading a movie using a file sharing application
- f. What's App Call

Question 19

Not yet answered

Marks out of  
1.00

[Flag question](#)

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

Select one:

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

Select the most suitable statement.

Select one:

- Converged networks carry social networking data.
- Converged networks carry data, voice, video & images over the same network.
- Converged networks are LANs.
- Converged networks are private networks.
- None of the given statements are true.

Match the given addresses to appropriate network addressing terms

34-F3-9A-36-68-BB

MAC Address



172.16.10.9

IPv4 Address



255.0.0.0

Class A Subnet Mask

Choose...



255.255.255.0

Class C Subnet MASK

Choose...



2001:db8:85a3::8a2e:370:7334

Choose... IPv6 Address

25

answered  
out of  
question

Allocating and deallocating memory is a service coming under **operating system** X

## Memory Management

Answered  
out of  
question

What is "Attenuation" in a data transmission medium?

Select one:

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

Which of the following statement is NOT true?

Select one:

- a. Unguided media uses electromagnetic waves
- b. Unguided media are also known as as wireless communication
- c. Unguided media transmission requires an antenna
- d. Unguided media signals are transmitted into air
- e. Fiber optics is an example of Unguided media

Match the description with the appropriate ISO-OSI Layer

Organizes bits into frames which helps hop-to-hop delivery	Data Link Layer	✓
Translate, Encrypt & Compress Data	Presentation Layer	✓
Provide reliable process to process message delivery	Transport Layer	✓
Allows users to access network resources	Application Layer	✓

What is the correct statement about a Collision Domain?

Select one:

- A collection of two or more computers in which, if more than one sender tries to send data simultaneously, the signals will collide in the transmission media and make all the sent information unusable.
- In a router, all ports are in a single collision domain
- A collection of two or more computers in which, if one sender tries to send data, the signal will collide in the transmission media and make the sent information unusable.
- A collection of two or more computers in which, one computer tries to send data after another computer, the signals will collide in the transmission media and make all the sent information unusable.
- None of the mentioned is true.

Question 6

Not yet answered

Marked out of  
0.50

Flag question

Select the statement which is not true.

Select one:

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

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

Select one or more:

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

Select the **incorrect** statement.

Select one:

- Internet is the largest WAN spanning the entire globe.
- Switches are used to connect LANs to a WAN.
- A LAN connects network devices over a relatively small geographical area.
- A network spanning over a geographical area larger than a LAN, but smaller than a WAN, such as a city, is called a MAN.
- A WAN spans across a large geographical area. It is a geographically-dispersed collection of LANs.

Match the given IPv4 Address to the correct Class

10.59.135.4	Class A	▼	Class A - (0-126)
210.59.135.4	Class C	▼	Class B - (128-191)
227.21.6.173	Class D	▼	Class C - (192-223)
130.59.135.4	Class B	▼	Class D - (224 - 239)
			Class E - (240 -255)

Combinational Logic Circuit shows required input combination for a given change of state.

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

IPv4 Address: 198.168.10.1 **11000000.10101000.**

- IPv4 Address in Binary: **11000110** . **10101000** . 00001010 . 00000001
- How Many Hosts Can be Connected this Network: **254** **254**

Question 23  
Not yet answered  
Marked out of  
1.00  
Flag question

Broadcast address

Answer:

**It is an address used by the router to send a message to every host on the local network.**

Question 24  
Not yet answered  
Marked out of  
1.00  
Flag question

The difference between memory and storage is that the memory is  
and storage is permanent.

**Temporary**

Question 25  
Not yet answered  
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1.00  
Flag question

**Boot Loader** is loaded to main memory at the end of Bootstrapping process.

**Address Bus** is the uni-directional bus in system bus.



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

For the given IP address find the following.

IP address: - 193.169.168.2

- Network address:  .  .  .  193.169.168.0
- Subnet mask:  .  .  .  255.255.255.0
- Broadcast address: 193 . 169 . 168 .  193.169.168.255
- 1<sup>st</sup> usable IP address: 193 . 169 . 168 .  193.169.168.1
- Last usable IP address: 193 . 169 . 168 .  193.169.168.254
- IP Address Class: (Only type the Letter) C

Question 22

Not yet answered

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2.00

Flag question

John typed 'ipconfig' command while being connected to his home WiFi and obtained the following output. Which of the following computers/devices can be connected to John's home network?

```
IPv4 Address . . . . . : 172.20.2.1 (Preferred)
Subnet Mask . . . . . : 255.255.0.0
Default Gateway . . . . . : 2001:470:ed3d:1000::1
                           fe80::2e8:4cff:fe68:43d0%3
                           172.20.0.1
DHCPv6 IAID . . . . . : 60578958
DHCPv6 Client DUID . . . . . : 00-01-00-01-1E-88-A9-CE-9C-5C-8E-8F-17-B9
DNS Servers . . . . . : 2001:470:ed3d:1000::11
                           2001:470:ed3d:1000::12
                           172.20.0.11
                           172.20.0.12
NetBIOS over Tcpip. . . . . : Enabled
Connection-specific DNS Suffix Search List :
                                busbarcast.com
```

Answer: | 65 534

BIOS program is typically stored in EEPROM, generally known as **Firmware**

Address of the next instruction of the program is stored in **Program Counter**

### 1 st usable IP address

Answer: The address that get by adding one to the network address.

### A Karnaugh Map

can be used to replace Boolean Algebraic method, when simplifying a Boolean expression.

### Data Bus

transfer data/instruction to and from CPU.

### Boot loader

is loaded to main memory at the end of Bootstrapping process.

### Logic Gates

are the building blocks of digital circuits.

General Purpose registers are built with

### Microprocessor

Write the number of bits used in an IPv4 address.

Answer: 32 bits

32 bits

An operating system is | **Interrupt** driven.

Each device controller has a **Buffers** to store data temporarily until they sent to CPU or Memory.

RISC has instructions that can be executed within **One Clock** cycle.

**Compression** is used to reduce file size and file transmission time.

**Question 21**

Not yet answered  
Marked out of  
2.00

Flag question

John typed 'ipconfig' command while being connected to his home WiFi and obtained the following result. How many IPv4 computers/devices can be connected to John's home network?

```
wireless LAN adapter Wi-Fi:  
Connection-specific DNS Suffix . :  
IPv6 Address . . . . . : 2402:4000:2080:76c8:74a5:2827:c1c0:4  
IPv6 Address . . . . . : 2402:4000:2182:5b3f:5095:effe:e4bc:5f61  
IPv6 Address . . . . . : 2402:4000:2182:5b3f:74a5:2827:c1c0:4  
Temporary IPv6 Address . . . . . : 2402:4000:2182:5b3f:a4e4:9e4c:8590:cb0  
Link-local IPv6 Address . . . . . : fe80::5095:effe:e4bc:5f63%4  
IPv4 Address . . . . . : 192.168.8.106  
Subnet Mask . . . . . : 255.255.255.0  
Default Gateway . . . . . : fe80::76a5:28ff:fe27:c1c0%4  
192.168.8.1
```

Answer: **254**

Solutions

LOCKDOWN BROWSER

Practice Test

Unauthorized user is a network ..... issue.

Select one:

- availability
- reliability
- quality of service
- scalability
- security

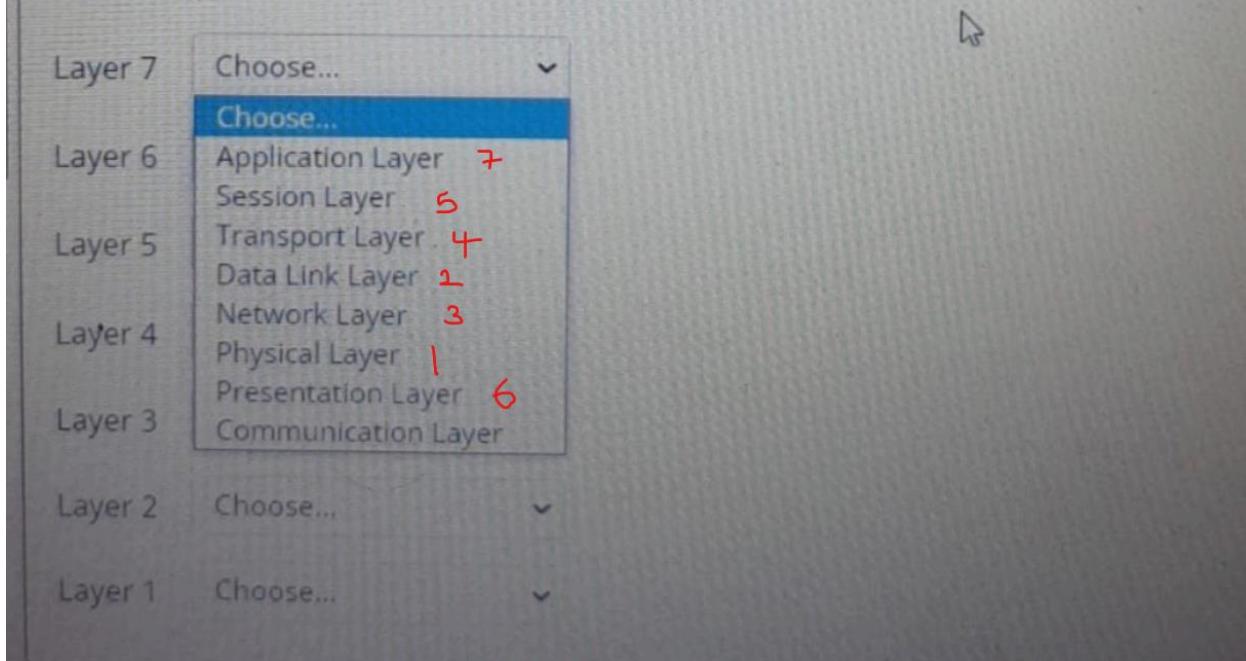
Cache works on the principle of

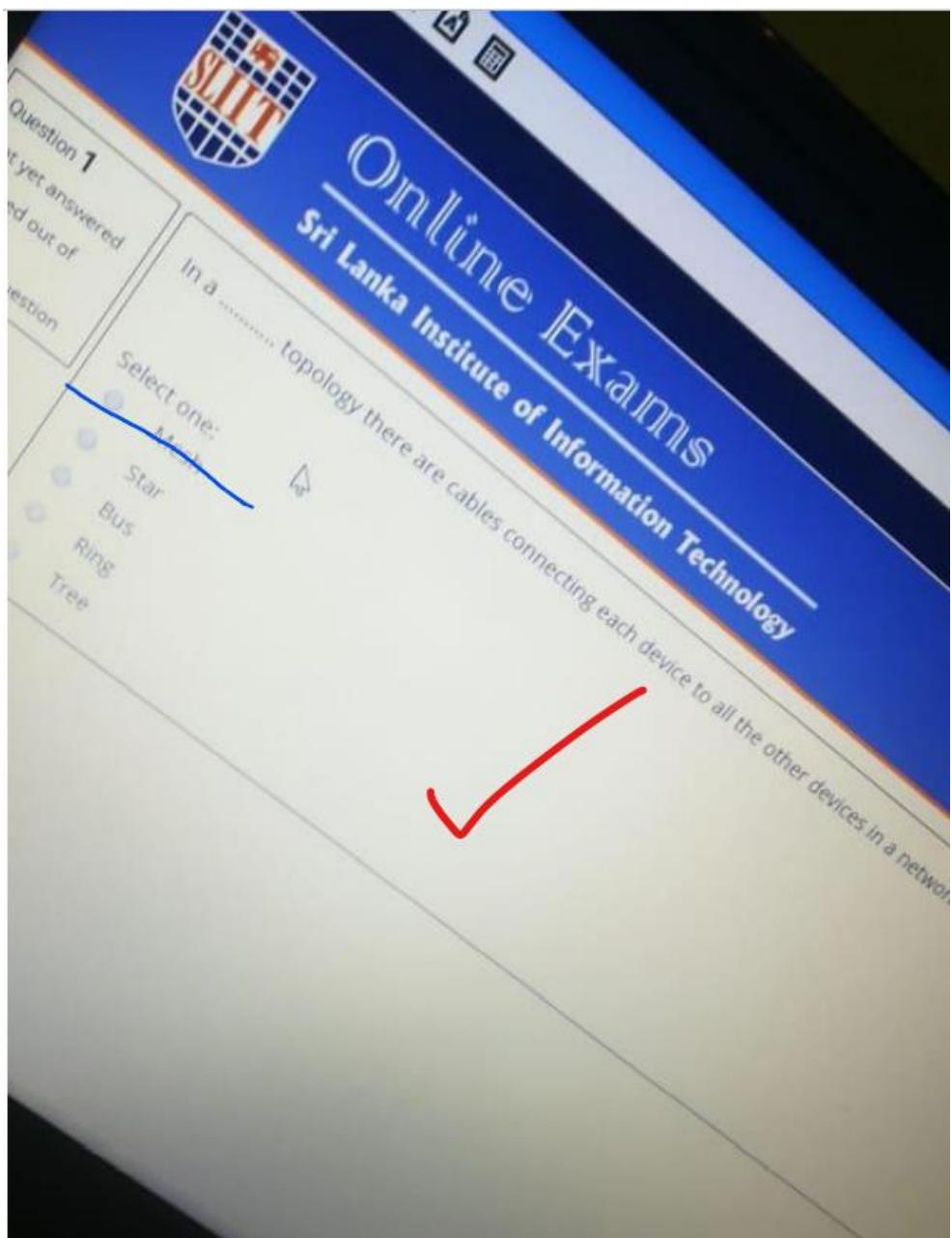
**Locality of reference.**

**Bit**

is the building block of memory devices.

Select the correct order of ISO-OSI layered reference model.







**Question 2**

Not yet answered

Marked out of  
1.25

Flag question

Convert 1520 bits into bytes

Select one:

- a. 190 bytes
- b. 180 bytes
- c. 182 bytes
- d. 175 bytes
- e. 152 bytes

1 bit = 0.125 Bytes



Mutability of storage devices explains

Select one:

- a. How storage locations are addressed.
- b. What happens to the content when power is not available
- c. How storage locations are addresses
- d. Time latency due to seek time and rotational delay
- e. Weather the content is read/write or read only

Mutability. Allows information to be overwritten at any time. A computer without some amount of read/write storage for primary storage purposes would be useless for many tasks. Modern computers typically use read/write storage also for secondary storage.

Next page

≡ Quiz navigation

MCQ

1	2	3	4
8	9	10	11
15	16	17	18

STRUCTURED

21	22	23	24	25
28	29	30		

ESSAY

31
32

FEEDBACK/DIRECTIONS

Which of these is not an activity the OS does to manage storage

Select one:

- a. Create and delete files
- b. Allocating storage
- c. Free-space management
- d. Hardware maintenance
- e. Backup

Select the correct statement.

Select one:

- A private network is not directly connected to Internet.
- If a network is directly connected to Internet, it will become a part of Internet.
- In a private network, it is mandatory to follow Internet standards.
- A private network is a set of interconnected Intranets.
- None of the given answers are true.

Next page

An attacker trying to manipulate individuals into performing actions or divulging confidential information is known as Social Engineering.

Select one:

- True
- False

Next page

Which of the following statements is correct?

Select one:

- a. A failure in Network layer affects transport layer
- b. A failure in Network layer affects Data Link layer
- c. A failure in Network layer affects entire communication
- d. A failure in Network layer stops the device from working entirely
- e. A failure in Network layer crashes the application

X



Select the incorrect statement regarding data

Select one:

- a. ASCII is an 7-bit code for 128 different characters.
- b. Data representation refers to the form in which data is stored, processed, and transmitted
- c. Digitization is the process of converting analog data into digital data.
- d. Numeric, alphabetic, special, alpha-numeric are different types of character data.
- e. One-bit parity is an error correction technique used in data storing and transmission.

check

Question 1

yet answered

Marked out of

Flag question

An unauthorized user is a network \_\_\_\_\_ issue.

Select one:

- security
- reliability
- scalability
- quality of service
- availability

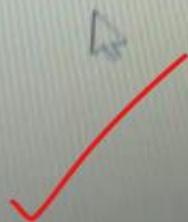
Steps of an instruction cycle is given below

- A. Instruction fetch (1)
- B. Data operation (4)
- C. Instruction operation decoding (2)
- D. Data store (5)
- E. Operand fetch (3)

Find the correct order of execution.

Select one:

- a. A, C, B, D, E
- b. B, A, C, D, E
- c. B, A, E, C, D
- d. D, C, A, B, E
- e. A, C, E, B, D



on 3

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d out of

g question

Select the continuous data of the following

Select one:

- a. Number of members of a family.
- b. Pages of a book.
- c. Number of students in SLIIT.
- d. Average of the three Subjects.
- e. Number of subjects we learn.

4

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out of

question

Which of the following pairs denote the two main types that the RAM is

Select one:

- a. SRAM and DRAM
- b. SRAM and DDRAM
- c. SDRAM and SRAM
- d. DRAM and VRAM
- e. VVRAM and SRAM



**3**

Answered  
out of  
question

Steps of designing a digital circuit to solve a real world problem is given below:

- A. K-maps are used to simplify the equations **4**
- B. The truth table is developed **3**
- C. Implemented using logic gates **5**
- D. The problem is analyzed **1**
- E. Identify input variables and output variables **2**

Find the correct order of execution.

Select one:

- a. A, C, B, D, E
- b. D, C, B, E, A
- c. B, D, E, C, A
- d. D, E, B, A, C
- e. A, C, E, B, D

The instruction currently being executed is stored in

Select one:

- a. Instruction register
- b. Instruction pointer
- c. Program counter
- d. Data register
- e. Accumulator

**Question 8**

Not yet answered

Marked out of  
1.25

Flag question

What method is used to input data in the 1st generation computers from the given below

Select one:

- a. Floppy disks
- b. Flash drive
- c. USB drivers
- d. Punch cards
- e. Compact disks

Which of the following program converts instructions to machine language?

Select one:

- a. Compressor
- b. Compiler
- c. Integrator
- d. Simulator
- e. None of the above

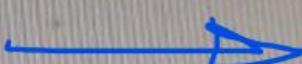
**Question 8**

Not yet answered

Marked out of  
1.25

Flag question

Which bus is unidirectional



Select one:

- a. Address bus
- b. Control bus
- c. Signal bus
- d. Current bus
- e. Data bus



## Online Exams

Sri Lanka Institute of Information Technology

Question 13

Not yet answered

Marked out of  
3.25

Flag question

Development of software for computers was started in:

Select one:

- a. 1st Generation
- b. 2nd Generation
- c. 3rd Generation
- d. 4th Generation
- e. 5th Generation



## Online Exams

Sri Lanka Institute of Information Technology

Question 5

Not yet answered

Marked out of  
1.25

Flag question

What would be the output of a comparator if two bits are equal?

Select one:

- a. 2
- b. 1
- c. 0
- d. 4
- e. 3

Select the incorrect statement

Select one:

- a. SPARC and Power PC are desktop computers that use RISC processors
- b. In RISC processors, more emphasis is given to software
- c. RISC normally has low cycles per second, large code sizes
- d. In CISC, more transistors are used for storing complex instructions
- e. Compiler workload is low in RISC based machines

**Question 10**

Not yet answered

Marked out of  
1.25

Flag question

Not a utility software given below

Select one:

- a. Antivirus software ✓
- b. Troubleshoot ✓
- c. Disk formatting ✓
- d. Control panel
- e. Defragmentation ✓

Given below are the features of first-generation computer systems. Which of the following isn't true

Select one:

- a. 1st generation computers used machine language ✓
- b. 1st generation computers had a well-developed OS system. ✗
- c. 1st generation computers were expensive to operate. ✓
- d. 1st generation computers used punch card system. ✓
- e. 1st generation computers used hard wired programming. ✓

Which of these is a characteristic of RISC

Select one:

- a. Complex Instructions
- b. Small Code Sizes
- c. Large Code Sizes
- d. High Cycles per Second
- e. Memory-to-memory

Question 8

Not yet answered

Marked out of  
1.25

Flag question

Optim  
b

If  $K = \text{Gates} + F/F$ ; What is K

Select one:

- a. Sequential Circuit
- b. Flip - Flops
- c. Minterms
- d. Combinational Circuit
- e. None of the above

only Gates

2

Answered  
of  
question

If there are 5 inputs to a decoder the number of outputs will be,

Select one:

- a. Infinite
- b. 32
- c. 16
- d. 8
- e. 4

$$\text{output} = 2^n$$

$n = \text{number of inputs}$

$$\text{Output} = 2^5 = 32 //$$

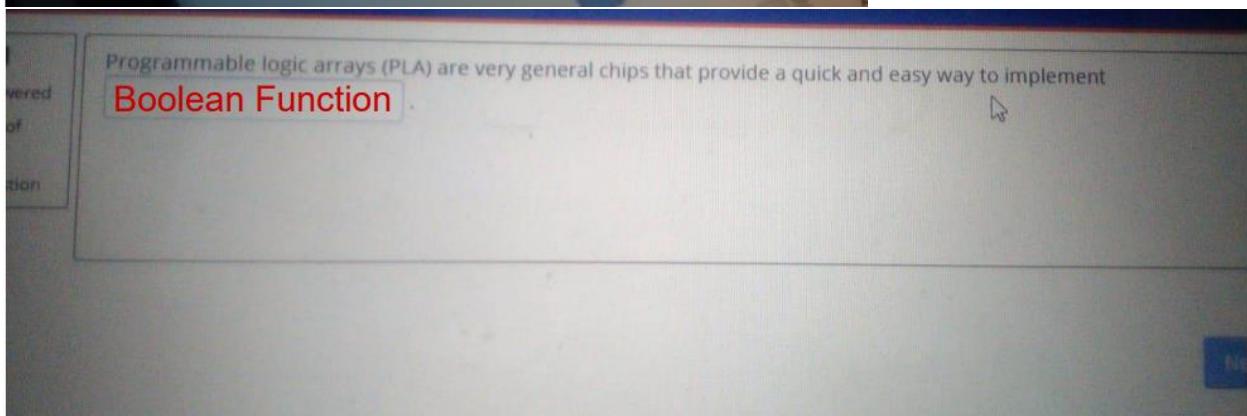
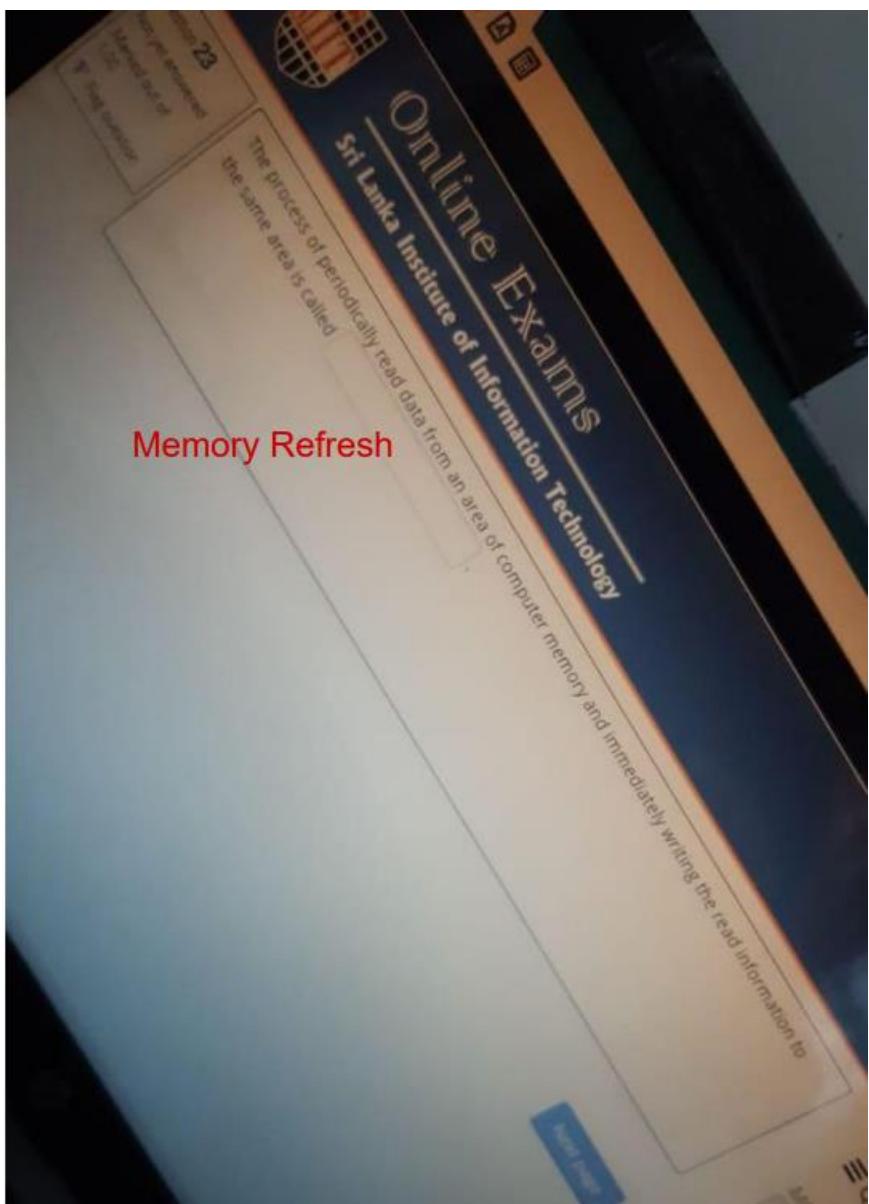
18

Answered  
of  
question

Which of the following is not an area of memory pointed by 8086 register

Select one:

- a. Code segment
- b. Data segment
- c. Instruct segment
- d. Stack segment
- e. Extra segment



**RISC**

are heavily used in real-time embedded systems.

[Next page](#)

23

A software generated interrupt is called

**a Trap**

**Clock Circuits**

emit pulse trains of precise repetition interval and width.

23

answered

out of

question

How many unique networks can be created in Class B?

Answer: **16 382**

[Next page](#)

Interrupt transfers control of a program to a **Interrupt service** routine.

Select the incorrect statement regarding the Dynamic RAM

Select one:

- a. Bits stored as charges in capacitors ✓
- b. No refreshing needed when powered
- c. Simpler construction, smaller per bit ✓
- d. Slower than static memory ✓
- e. Less expensive ✓

Nimal and his team analyzed a real-world problem to design a combinational circuit. They derived following truth table to record input (A, B, C, D) and output (f) behavior. They entered "X" in the output column where they *don't care* whether output is "0" or "1".

A	B	C	D	f
0	0	0	0	0
0	0	0	1	0
0	0	1	0	1
0	0	1	1	X
0	1	0	0	0
0	1	0	1	X
0	1	1	0	1
0	1	1	1	X

A	B	C	D	f
1	0	0	0	0
1	0	0	1	0
1	0	1	0	0
1	0	1	1	X
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	1

He needs your support to simplify output behavior function using a Karnaugh map (K-Map). Please write down the simplified Boolean function by using English letters A, B, C, D as variables. (write  $\bar{A}B\bar{C}$  as  $A'BC'$ , don't keep spaces between letters).

Answer:  $A'C + CD$

$$A'C + CD$$

Interface between application software and operating system is called

## System Software

SRI Lanka Institute of Information Technology

**Question 4**  
Not yet answered  
Marked out of 1.25  
Flag question

What is the BCD value of 481

Select one:

- a. 0001 1110 0001
- b. 0001 1110 0101
- c. 1111 0000 1
- d. 0001 1100 0001
- e. 1101 0000 1

0100 1000 0000

ion 3  
et answered  
d out of  
g question

What Is not an operating system activity under the storage management

Select one:

- a. Free-space management ✓
- b. Storage allocation ✓
- c. Disk scheduling ✓
- d. Backup and reset ✓
- e. None of above

Question 12  
Not yet answered  
Marked out of  
1.25  
Flag question

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How many minterms in a 4 variable K-map

Select one:

- a. 12
- b. 16
- c. 8
- d. 4
- e. 64

$$2^n = 2^4 = 16$$

on 15  
t answered  
d out of  
e question

Sri Lanka Institute of Information Technology

Calculate the number of total number of storage locations available for 8 bits of information

Select one:

- a. 32
- b. 255
- c. 127
- d. 256
- e. 16

$$2^n = 2^8 = 256$$

Question 16

Not yet answered  
Marked out of  
1.00  
Flag question

Which of the following is including only general purpose registers in 8086 architecture

Select one:

- a. AX, BX, CX, DX
- b. SP, BP, SI, DI
- c. RAM, ROM
- d. FLAGS, Flag register
- e. MAR, MDR

How many registers are found in the EU of the 8086 architecture

Select one:

- a. 3
- b. 8
- c. 4
- d. 6
- e. 16

Question 24  
Not yet answered  
Marked out of  
1.00  
Flag question

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## Data Compression

is used to reduce file size and file transmission time.

Ivan typed 'ipconfig' command while being connected to his home WiFi and obtained the following result. What is the broadcast address of his home network? (Write in dotted decimal format: E.g. 192.168.8.1)

```
C:\WINDOWS\system32\cmd.exe  
C:\Documents and Settings\ivan>ipconfig  
Windows IP Configuration  
  
Ethernet adapter Local Area Connection:  
  Connection-specific DNS Suffix . :  
    IP Address . . . . . : 192.168.1.101  
    Subnet Mask . . . . . : 255.255.255.0  
    Default Gateway . . . . . : 192.168.1.1  
  
Ethernet adapter Bluetooth Network Connection:  
  Media State . . . . . : Media disconnected  
C:\Documents and Settings\ivan>
```

Answer:

192.168.1.255

Sunil analyzed a real-world problem to design a combinational circuit. He derived following equations by carefully going through the line numbers of truth table.

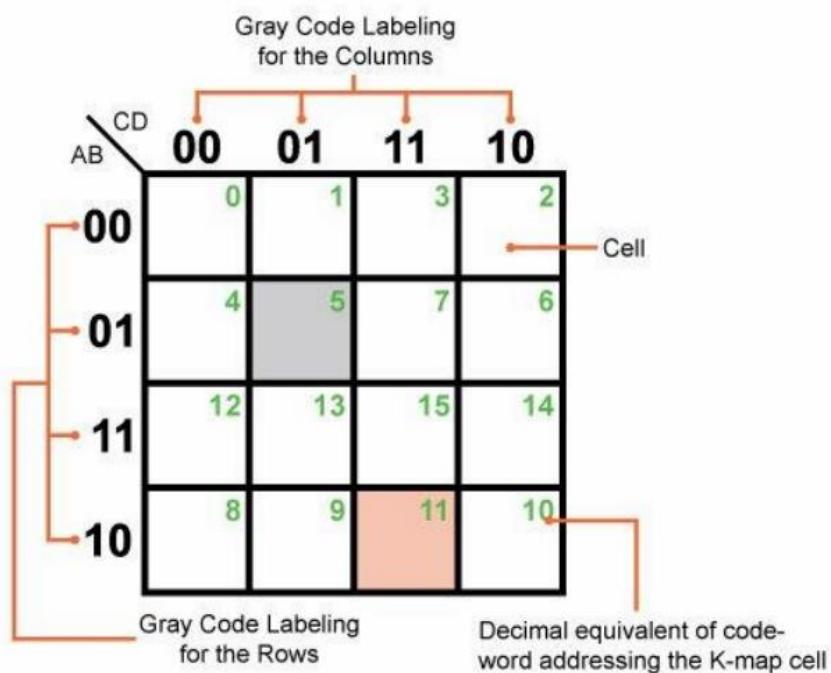
$$f = \sum(2, 3, 6, 15)$$

$$\text{don't\_care} = \sum(5, 7, 11)$$

He needs your support to simplify these equations using a Karnaugh map (K-Map). Please write down the simplified Boolean equation by using English letters A, B, C, D as variables. (write  $\bar{A}B\bar{C}$  as  $A'BC'$ , don't keep spaces between letters)

		AB	
		00	01
CD	00	0	4
	01	1	5
CD	11	3	7
	10	2	6
		12	13
		15	11
		14	10

Answer: **A'C + CD**



In the instruction ADD AX, 20H, the answer gets stored in **AX**

**Excitation Table**

shows required input combination for a given change of state.

**Next page**

How to reduce file size and transmission times of digital data

Select one:

- a. Zipping
- b. Extracting
- c. Unzipping
- d. Compress
- e. Hiding

select the answer which explains how SI and DI are used respectively

Select one:

- a. Used for multiplying and dividing, used as an address register
- b. Used with extended addressing commands, used in some addressing modes
- c. Used as an addressing register, used for multiplying and dividing
- d. Used in some addressing modes, used with extended addressing commands
- e. Used for arithmetic operation, used with extended addressing commands

What is the process of converting information, such as text, numbers, photo or music into digital data that can be manipulated by electronic vise

Select one:

- a. Digitalization
- b. Transmission
- c. Electronic circuits
- d. Digital revolution
- e. Data compression

What is the size of data bus and address bus in 8086 microprocessor respectively

Select one:

- a. 8 bit/ 16 bit
- b. 32 bit/ 32 bit
- c. 16 bit/ 8 bit
- d. 16 bit/ 32 bit
- e. 8 bit/ 64 bit

A logic gate can have

Select one:

- a. A single input and a single output
- b. Many inputs and many outputs
- c. Many inputs and a single output
- d. Single input and many outputs
- e. None of the above

What service of an operating system is related with allocating and deallocating memory space as needed

Select one:

- a. Protection and security
- b. Storage management
- c. Process management
- d. File management
- e. Memory management

What is the example of first generation computer

Select one:

- a. UNIVAC
- b. STAR 1000
- c. IBM 4341
- d. DEC 10
- e. PDP 1

A combinational circuit that converts binary information from the  $n$  coded inputs to a maximum of  $2^n$  unique outputs is called a

**Decoder**.

Next page

What instructions can only executable in kernel mode

Select one:

- a. Program
- b. Instructions designated as privileged
- c. Firmware
- d. Operating system
- e. None of the above

A semiconductor memory cell is fabricated with **Transistor**.

Sunil analyzed a real-world problem to design a combinational circuit. He derived following equations by carefully going through the line numbers of truth table.

$$f = \sum (1, 5, 9, 15)$$

$$don't\_care = \sum (3, 11, 13)$$

He needs your support to simplify these equations using a Karnaugh map (K-Map). Please write down the simplified Boolean equation by using English letters A, B, C, D as variables. (write  $\bar{A}B\bar{C}$  as  $A'BC'$ , don't keep spaces between letters)

Answer: **AD + C'D**

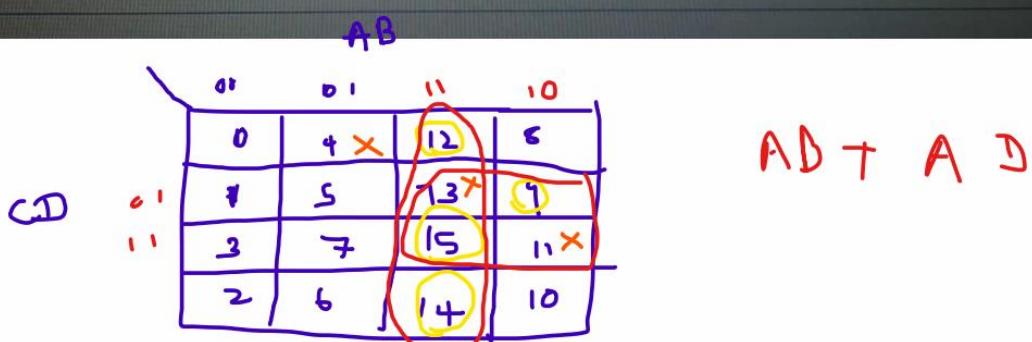
Sunil analyzed a real-world problem to design a combinational circuit. He derived following equations by carefully going through the line numbers of truth table.

$$f = \sum (9, 12, 14, 15)$$

$$\text{don't\_care} = \sum (4, 11, 13)$$

He needs your support to simplify these equations using a Karnaugh map (K-Map). Please write down the simplified Boolean equation by using English letters A, B, C, D as variables. (write  $\bar{A}\bar{B}\bar{C}$  as  $A'BC'$ , don't keep spaces between letters)

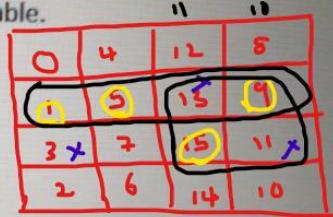
Answer:  $AB + AD$



Sunil analyzed a real-world problem to design a combinational circuit. He derived following equations by carefully going through the line numbers of truth table.

$$f = \sum (1, 5, 9, 15)$$

$$\text{don't\_care} = \sum (3, 11, 13)$$



He needs your support to simplify these equations using a Karnaugh map (K-Map). Please write down the simplified Boolean equation by using English letters A, B, C, D as variables. (write  $\bar{A}\bar{B}\bar{C}$  as  $A'BC'$ , don't keep spaces between letters)

Answer:  $A'B+B'C+C'D$

**Question 16**

Not yet answered

Marked out of  
1.25

Flag question

Select the correct logic circuit categories

Select one:

- a. Input and output
- b. Combinational and sequential
- c. Comparator circuits
- d. Multiplexer
- e. Encoder

**Question 13**

Not yet answered

Marked out of  
1.00

Flag question

What is the meaning of ADD and CMP

Select one:

- a. add two numbers and compare number
- b. Storage elements and next stage
- c. Output information to device
- d. Storage element and unconditional jump
- e. Unconditional jump and store information to RAM

**Question 25**

Not yet answered

Marked out of  
1.00

Flag question

Write the number of bits used in an IPv6 address.

Answer: 128 **128**

Binary coded decimal for number 12 is 0001 0010 .Binary coded decimal for number 45 is 0100 0101. What is the binary coded decimal for number 52

Select one:

- a. 0110 0010
- b. 0101 0010
- c. 0001 0100
- d. 1101 0010
- e. 0101 0011

Steps of an instruction cycle is given below:

- A. Instruction fetch 1
- B. Data operation 4
- C. Instruction operation decoding 2
- D. Data store 5
- E. Operand fetch 3

Find the correct order of execution.

Select one:

- a. B, A, C, D, E
- b. A, C, E, B, D
- c. D, C, A, B, E
- d. B, A, E, C, D
- e. A, C, B, D, E

Which of the following is not a file extension of a compressed

Select one:

- a. .tar.gz ✓
- b. .zip ✓
- c. All are compressed file extensions
- d. .gz ✓
- e. .pkg ✓

Question 16  
Not yet answered  
Marked out of  
1.25  
 Flag question

Choose the correct storage device that works as a non-volatile memory

Select one:

- a. Registers
- b. S-RAM
- c. D-RAM
- d. Cache memory
- e. BIOS chip

What does BIU of the 8086 architecture stands for

Select one:

- a. Bug Intel Unit
- b. Bus Interface Unit
- c. Bus Interface Union
- d. Bug Interface Unit
- e. Bus Intel Unit

Online Exams  
Sri Lanka Institute of Information Technology

Network address speed(in Mbps) of a certain device is equal 32. What is the networking speed of the device in Kilobytes/sec

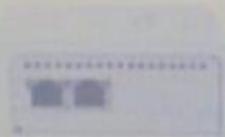
Select one:

- a.  $32 \times 1000$  kilobytes
- b.  $32 \times 100$  kilobytes
- c.  $32 \times 10$  kilobytes
- d.  $4 \times 1000$  kilobytes
- e.  $8 \times 1000$  kilobytes

$32 \text{ Mbps} \downarrow$   
 ~~$32 \times 1024 \text{ Kbps}$~~   
 ~~$32 \times 1000 \text{ Kbps}$~~

$32 \text{ Mbps} \downarrow$   
 $1 \text{ hr} = 3600 \text{ sec}$   
 $32 \times 1024 \text{ Kbps} \times 3600 \text{ sec} = 1024 \text{ Kbps}$

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



Repeater



Hub

Select one:

- a. These devices are used to build a PAN
- b. These devices are used to connect multiple networks
- c. These devices are used to build a LAN
- d. These devices cannot be used to create a network

tion 2

Not yet answered

Marked out of

Flag question

Which of the following is a primary memory

Select one:

- a. CD
- b. Floppy disk
- c. ROM
- d. SSD
- e. HDD

Question 5

Not yet answered

Marked out of  
1.25

Flag question

what stores the date and time in a computer

Select one:

- a. Register
- b. ROM
- c. RAM
- d. CMOS
- e. Cache memory

# Online Exam

## Sri Lanka Institute of Information Technology

What does ENIAC stand for

Select one:

- a. None of the above
- b. Electrical Numerical Integrator And Converter
- c. Electrical Number integrator And Calculator
- d. Electronic Number Invertor And Calculator
- e. Electronic Numerical Integrator And Calculator

What is the process done by the program called POST which is run by the computer's basic input/output system

Select one:

- a. Check all the hardware and confirm that all are functioning properly
- b. Activating the bootstrap program
- c. Displaying the initial text formation which is displayed on the screen
- d. Displaying the user interface after the control of the computer is taken by the operating system
- e. Starting executions after the Operating system is loaded

on 6

nt answered

d out of

g question

The only program always runs in the computer is

Select one:

- a. Kernel
- b. Word editor
- c. Database systems
- d. Graphic program
- e. Web browsers

Inputs and outputs can be defined as the main components of a computer. Select the response only with input devices from the following answers

Select one:

- a. Keyboard, Pen-drive, Scanner, Bar code reader
- b. Keyboard, Webcam, Pen-drive, Scanner
- c. Keyboard, Optical pen, CD, Scanner
- d. Keyboard, Optical pen, Scanner, Bar code reader
- e. Keyboard, CD, Optical pen, Bar code reader

Next page

Find the correct statement about sequential circuits

Select one:

- a. 3-to-8 line decoder can be constructed using 2, 2-to-4 line decoders
- b. PLA provides a quick and easy way to implement Boolean functions
- c. Full adder circuit can be made from 2 half-adder circuits
- d. Has a memory to keep past output information to calculate current output
- e. The simplest comparator circuit is an exclusive NOR gate

The CPU is engaged in executing a certain program, let it be program1. While it is getting executed, another program (program 2) needs to be executed. Where does that program is stored just before sending an interrupt request by the device controller?

Select one:

- a. Hard disk
- b. Main memory
- c. Cache memory
- d. Registers
- e. Local buffers

Each device controller has a  to store data temporarily until they sent to CPU or Memory.

**Cache Memory**

[Next page](#)

**Question 18**  
Not yet answered  
Marked out of 1.25  
 Flag question

What is the service that usually an OS doesn't execute

Select one:

- a. File system management
- b. Storage management
- c. Firmware management
- d. Process management
- e. Security management

How many unique networks can be created in Class A?

Answer: 126

126

I

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.

		CD	
		00	01
AB	00	1	0
	01	1	1
10	0	0	0
11	0	0	0

$\bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}B\bar{C}\bar{D} + \bar{A}BC\bar{D} + A\bar{B}CD$

		CD	
		00	01
AB	00	0	1
	01	4	5
11	12	13	15
10	8	9	11

$m_0, m_4, m_7, m_6$

113

A. Write the minterm numbers that will be in the Boolean equation represented by the K-Map above. (Ex: use  $m_1$  to represent minterm 1)  $m_0, m_4, m_7, m_6$

B. After carefully studying the problem again, you found out that it is not a problem even minterms 2, 3, and 5 being 0 or 1. By taking your new findings into consideration, simplify above K-map. Write the simplified Boolean equation in Sop form. (Write  $AB\bar{C}\bar{D}$  as  $AB'CD'$  in your answer. Don't keep spaces between letters)  $A'D' + A'C$

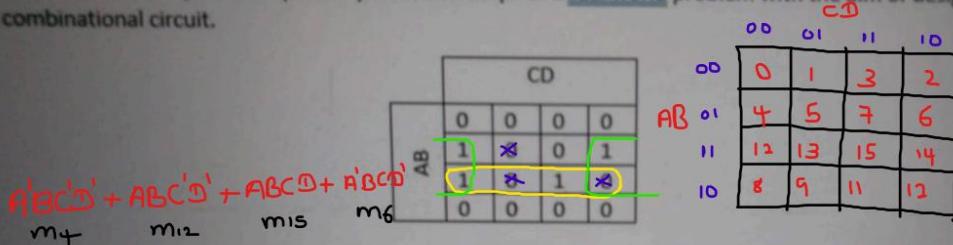
C. How many AND gates and OR gates are needed to implement this circuit.

i) AND: 2

ii) OR: 1

ST  
M  
2

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.



A. Write the minterm numbers that will be in the Boolean equation represented by the K-Map above. (Ex: use m<sub>1</sub> to represent minterm 1) m<sub>4</sub>, m<sub>12</sub>, m<sub>15</sub>, m<sub>6</sub>

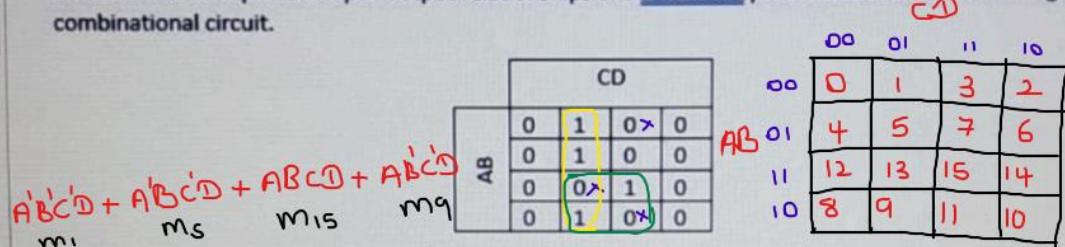
B. After carefully studying the problem again, you found out that it is not a problem even minterms 5, 13, and 14 being 0 or 1. By taking your new findings into consideration, simplify above K-map. Write the simplified Boolean equation in SOP form. (Write  $\bar{A}B\bar{C}\bar{D}$  as  $AB'C'D'$  in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

$$AB + BD'$$

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

- i) AND: 2  
ii) OR: 1

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.



A. Write the minterm numbers that will be in the Boolean equation represented by the K-Map above. (Ex: use m<sub>1</sub> to represent minterm 1) m<sub>1</sub>, m<sub>5</sub>, m<sub>15</sub>, m<sub>9</sub>

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  $\bar{A}B\bar{C}\bar{D}$  as  $AB'C'D'$  in your answer. Don't keep spaces between letters)

$$C'D + AD$$

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

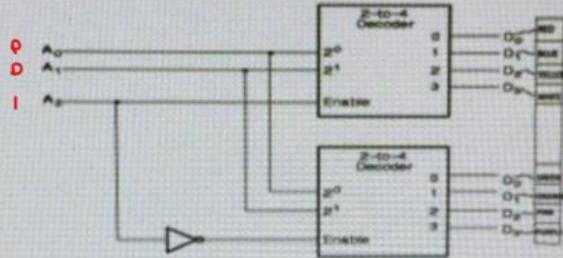
- i) AND: 2  
ii) OR: 1

**Question 27**

Not yet answered  
Marked out of  
1.00

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.

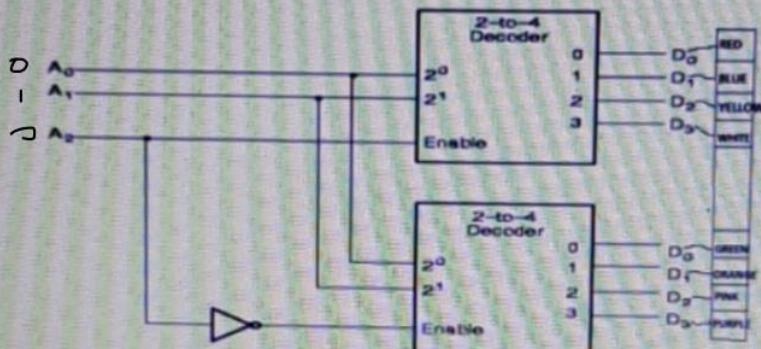


The functionality of the 2-4 decoder is given below.

Inputs			Outputs			
A <sub>2</sub>	A <sub>1</sub>	A <sub>0</sub>	D <sub>0</sub>	D <sub>1</sub>	D <sub>2</sub>	D <sub>3</sub>
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

- What are the input values that must be provided for A<sub>2</sub>, A<sub>1</sub>, A<sub>0</sub> respectively, to have the BLUE light ON? **110**
- What are the input values that must be provided for A<sub>2</sub>, A<sub>1</sub>, A<sub>0</sub> respectively, to have the GREEN light ON? **000**
- If you need to have both the RED and GREEN lights ON, what is the modification you need to do to the above circuit? **Remove the NOT Gate**

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? **010**
- b. What are the input values that must be provided for A2, A1, A0 respectively, to have the RED light ON? **100**
- 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? **Remove the NOT Gate**