

## COMPUTER NETWORKING SELECCIÓN ÚNICA

- 1) Which generation of computers used integrated circuit technology for information processing?
- A) Fifth
  - B) First
  - C) Third
  - D) Fourth

- 2) Read the information.

The theoretical and practical knowledge that allow one to conceive and automatize systems of mechanical structures.

Which concept is mentioned in the information above?

- A) Robotic
- B) Telematics
- C) Virtual reality
- D) Artificial intelligence

- 3) Read the information.

I. It's a program written intentionally to be installed in a user's computer without the owner's permission.  
II. It represents a parasite program because it can continue with a self expansion.  
III. It creates a search index to modify confidential information from a computer.  
IV. It works as a filter to execute information process in a computer.

According to the information above, which numbers identify the concept of computer virus?

- A) I and II
- B) I and III
- C) II and III
- D) II and IV

4) Read the definition.

Application that is installed in a network to protect it against unauthorized users and malicious attacks.

Which concept refers to the definition above? The \_\_\_\_\_.

- A) Firewall
- B) Adware
- C) Spyware
- D) Gradware

5) Consider the operating system command for MS-DOS.

DIR/S

The command above allows to \_\_\_\_\_.

- A) present a wide format list with the names of the files in a directory
- B) display the names of the files of all directories and subdirectories
- C) display the names of the files in common letters
- D) show the files attributes conforming a directory

6) In the MS-DOS operating system, the PATH command specifies \_\_\_\_\_.

- A) a list of subdirectories where the MS-DOS looks for executables files
- B) a driver to use the extended memory
- C) the height and length of the screen
- D) the mode of the parallel printer (port)

7) Read the information.

This kind of service represents a method of real time communication based on text, performed through a network among two or more users.

According to the previous information, what type of service is offered by the Internet? The \_\_\_\_\_.

- A) chat
- B) e-mail
- C) telnet
- D) file transfer

- 8) The protocol below that provides the right access to information on the World Wide Web is \_\_\_\_\_.
- A) URL
  - B) FTP
  - C) HTML
  - D) HTTP

- 9) Read the information.

- I. It works like a starting point for the online users' experience.
- II. It uses the chromatic circle to set for searchers index.
- III. It uses explicit and consistent labels for navigation.
- IV. It offers a guide to the search of information.

According to the information above, which numbers identify a navigational web site?

- A) I and IV
  - B) I and III
  - C) II and IV
  - D) II and III
- 10) Read the information.

The web site doesn't create content at the time a user visits it, but keeps previously information in the web server. The same is applied to all the guests.

Based on the previous information, what kind of site is the information referring to? The \_\_\_\_\_ site.

- A) static
- B) effective
- C) dynamic
- D) interactive

11) Read the list of components.

- |                  |
|------------------|
| I. Input         |
| II. Process      |
| III. Feasibility |
| IV. Performance  |

According to the previous information, which numbers identify two basic components of any information system?

- A) I and II
- B) I and III
- C) II and IV
- D) III and IV

12) Read the text about connectivity.

It represents a multiplexing technique that distributes information units called alternate time slots. It offers multiple access to a small group of frequencies.
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According to the previous information, what telephone technology does the text refer to?

- A) GSM
- B) UMTS
- C) TDMA
- D) GPRS

13) Read the information about connectivity:

- |  |
|--|
| I. It is a communication protocol designed for low consumption equipment and coverage. |
| II. It is an industrial specification for personal wireless networks.                  |
| III. It uses the standard IEEE 802.15.   |

What is the wireless technology presented in the information above?

- A) Wi Fi
- B) Satellite
- C) Bluetooth
- D) Microwave

14) What kind of chemical agents can be found in a workplace?

- A) powder, humidity and bacteria
- B) bacteria , radiation and noise
- C) humidity, fungus and noise
- D) dust, fog and gasses

15) Read the information about computer architecture.

- I. It contains eight lines that transmit one full byte at the same time.
- II. It supports transfer speeds higher than serial port.
- III. It is configured as LPT1, LPT2 o LPT3.
- IV. It is known as bi-directional ports.

According to previous information, which numbers identify the parallel port?

- A) I and IV
- B) I and III
- C) II and III
- D) II and IV

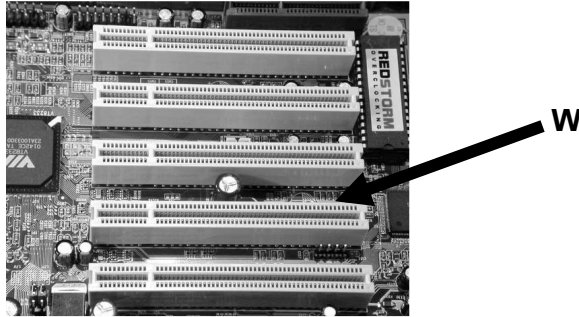
16) Consider the illustration of an internal component of the computer.



What function is the component shown in the illustration above in charge of? It \_\_\_\_\_.

- A) optimizes the bandwidth among the motherboard buses avoiding overheating
- B) speeds up data transfer between buses avoiding high temperatures in the channels of communication
- C) activates the power circuit of connectors P8 and P9 to prevent overheating between the circuits involved
- D) absorbs and dissipates the heat produced by an electrical component as an integrated circuit to prevent overheating

17) Consider the illustration.



What type of expansion slot is indicated by the letter W in the illustration above?

- A) ATA
- B) ISA
- C) PCI
- D) EISA

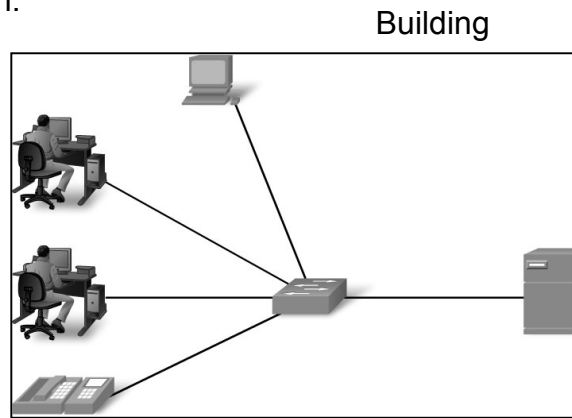
18) Read the information.

The field of communication technology that represents the link between computers and telecommunications.

Which concept is presented in the information above?

- A) IP calls
- B) Timing
- C) Telematic
- D) Teleprocessing

19) Consider the illustration:



What kind of network is shown in the illustration above?

- A) LAN
- B) WAN
- C) MAN
- D) WLAN

20) Read the information.

The transmission method that employs multiple channels into a single medium. This enables more than one workstation to transmit simultaneously.

The information above refers to the concept of \_\_\_\_\_ transmission.

- A) duplex
- B) simplex
- C) synchronous
- D) asynchronous

21) Read the information:

- I. It provides transportation for the bits that make up the second layer frame.
- II. It defines mechanical, electrical interfaces and notifies network timing.
- III. It establishes the physical address and report correction errors.
- IV. It reestablishes the connection in case of failures.

According to previous information, which numbers identify the first layer of OSI Reference Model?

- A) I and II
- B) I and IV
- C) II and III
- D) II and IV

22) What name is given to the fourth level PDU of the OSI Reference Model?

- A) Bits
- B) Data
- C) Package
- D) Segment

23) Read the information.

This topology has all its nodes connected directly to a common wire causing direct communication. The breaking of this wire causes hosts to disconnect.

What type of topology is referred to in the information above? The \_\_\_\_\_ topology.

- A) reticular
- B) ring
- C) star
- D) bus



24) Consider the illustration:



What topology is presented in the above illustration? The \_\_\_\_\_ topology.

- A) star
- B) ring
- C) hybrid
- D) reticular

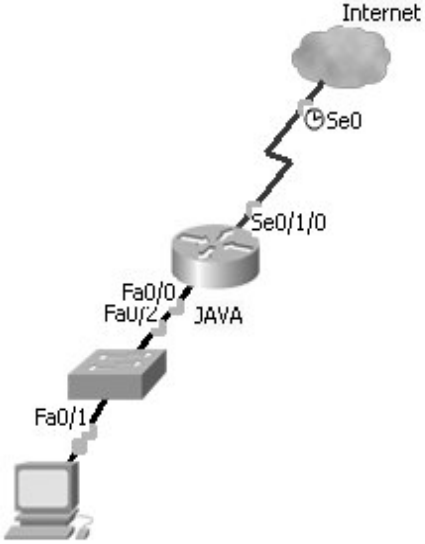
25) Read the information.

It uses a set of public addresses and assigns them in order of arrival. When a host with a private IP addresses request access to the Internet, it chooses an IP address from a pool that has not been used by another host.

What kind of NAT is presented in the information above?

- A) static
- B) dynamic
- C) overloaded
- D) address port

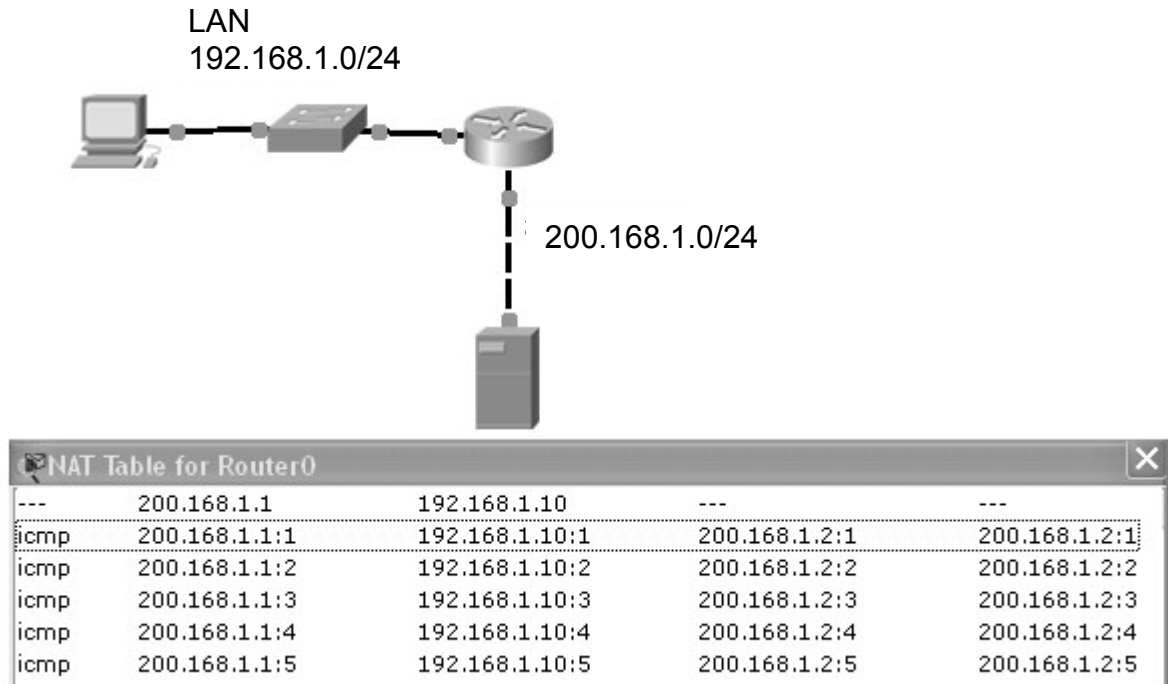
26) Consider the information presented in the illustration.

	<pre>&lt;Result is omitted&gt; hostname Java interface FastEthernet0/0 ip address 192.168.0.1 255.255.0.0 &lt;Result is omitted&gt; interface Serial0/1/0 ip address 221.221.221.1 255.255.255.0 ip nat outside  &lt;Result is omitted&gt;  ip nat inside source list 1 interface Serial0/1/0 overload ip classless  access-list 1 permit 192.168.0.0 0.0.255.255 &lt;Result is omitted&gt;</pre>
---	---

According to the information above, what is a valid network address to obtain access to the Internet?

- A) 192.168.0.1/18
- B) 192.168.0.2/21
- C) 192.168.0.5/16
- D) 192.168.0.6/12

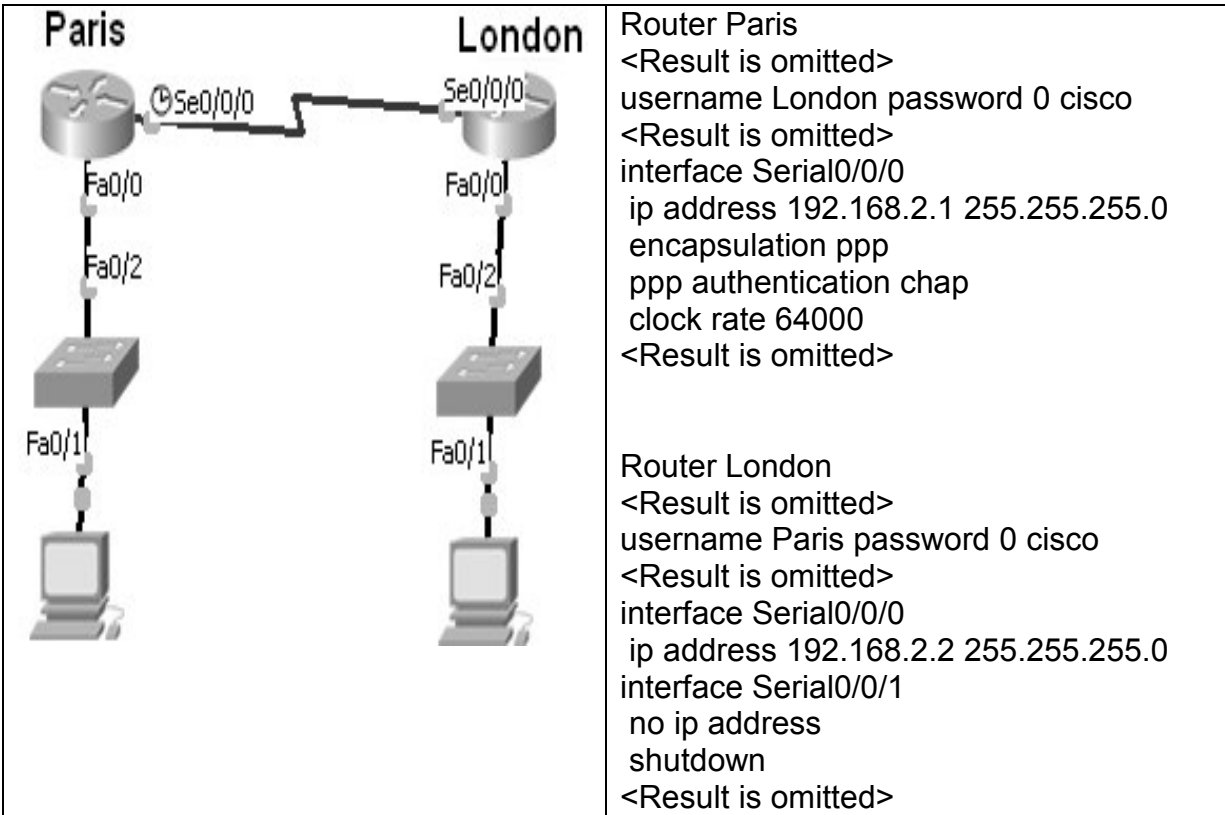
27) Consider the information presented in the illustration.



According to the information above, what is the local external net address?

- A) 200.168.1.2
- B) 200.168.2.0
- C) 192.168.1.10
- D) 192.168.1.15

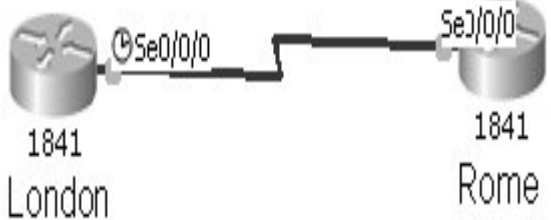
28) Consider the information.



According to the information presented above, why can't the Paris router can't communicate with the London router? Because \_\_\_\_\_.

- A) the interface serial has been disconnected with the command shut down
- B) encapsulation in London router is misconfigured
- C) the PPP negotiation fails on the Paris router
- D) the usernames are misconfigured

29) Consider the information.

 <p>London 1841</p> <p>Rome 1841</p>	<pre>London#show interfaces s0/0/0 Serial0/0/0 is up, line protocol is down (disabled) Hardware is HD64570 Internet address is 192.168.2.1/24 MTU 1500 bytes, BW 1544 Kbit, DLY 20000 usec, reliability 255/255, txload 1/255, rxload 1/255 Encapsulation PPP, loopback not set, keepalive set (10 sec) LCP Closed &lt;Result is omitted&gt;</pre>
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According to the previous information, why can't the London router communicate with the Rome router? Because \_\_\_\_\_.

- A) the line protocol is off
- B) a failure in negotiation with the PPP
- C) the serial interface 0/0/0 is misconfigured
- D) the encapsulation must be configured as a DLCI

30) Consider the illustration.

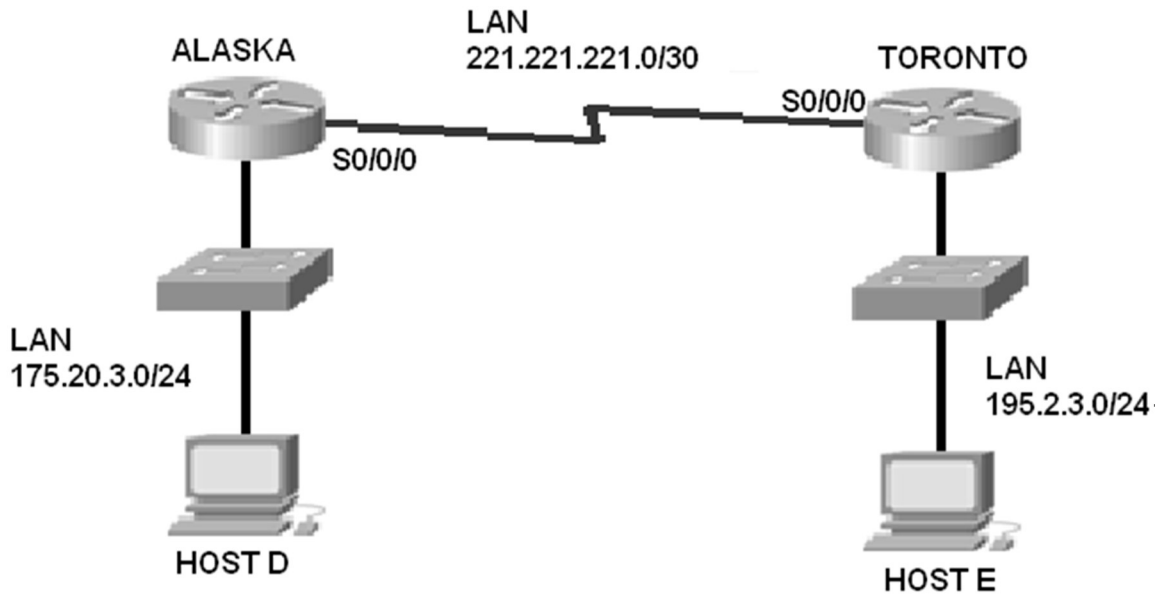
```
R2-Central#show ip interface brief
```

Interface	IP-Address	OK?	Method	Status	Protocol
FastEthernet0/0	172.16.255.254	YES	manual	up	up
FastEthernet0/1	unassigned	YES	unset	administratively down	down
Serial0/0/0	10.10.10.5	YES	manual	up	up
Serial0/0/1	unassigned	YES	unset	down	down

According to the illustration above, which interfaces have problems in the third layer?

- A) Fa0/0 and Fa0/1
- B) S0/0/1 and Fa0/1
- C) S0/0/0 and Fa0/0
- D) S0/0/0 and S0/0/1

31) Consider the information presented in the figure.



```
TORONTO#show ip route
```

```
<Result is omitted>
```

```
C 195.2.3.0/24 is directly connected, FastEthernet0/0
```

```
221.221.221.0/30 is subnetted, 1 subnets
```

```
C 221.221.221.0 is directly connected, Serial0/0/0
```

```
ALASKA#show ip route
```

```
<Result is omitted >
```

```
175.20.0.0/24 is subnetted, 1 subnets
```

```
C 175.20.3.0 is directly connected, FastEthernet0/0
```

```
S 195.2.3.0/24 is directly connected, Serial0/0/0
```

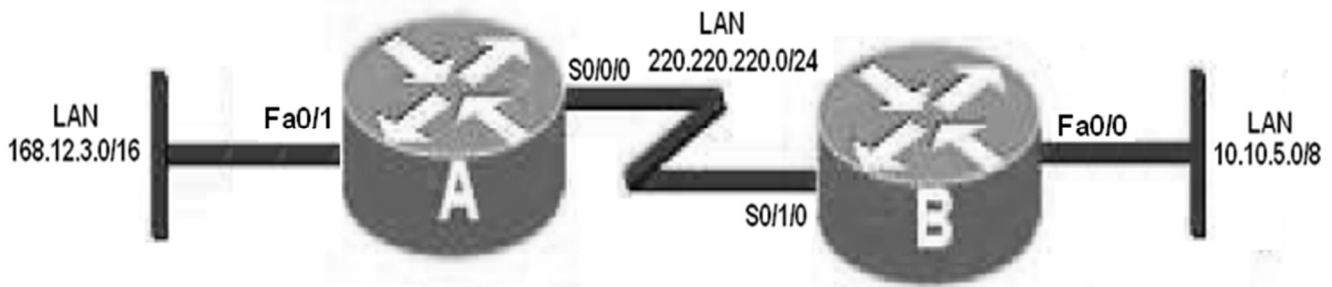
```
221.221.221.0/30 is subnetted, 1 subnets
```

```
C 221.221.221.0 is directly connected, Serial0/0/0
```

Host E has connectivity to the Alaska router, however, there are connectivity failures with Host D. What static route should be configured to solve the problem?

- A) TORONTO(config)#ip route 195.2.3.0 255.255.255.0 s0/0/0
- B) TORONTO(config)#ip route 175.20.3.0 255.255.255.0 s0/0/0
- C) ALASKA(config)#ip route 195.2.30.0 255.255.255.0 Serial0/0/0
- D) ALASKA(config)#ip route 175.20.30.0 255.255.255.0 Serial0/0/0

32) Consider the information that is presented in the figure.



According to the previous information, which are the two commands that allow connectivity between 168.12.3.0 and 10.10.5.0 networks without recurrent search?

- A) A(config)#ip route 10.10.5.0 255.0.0.0 Serial0/0/0 and B(config)#ip route 168.12.3.0 255.255.0.0 Serial0/1/0
- B) A(config)#ip route 10.10.5.0 255.0.0.0 Serial0/0/0 and B(config)#ip route 168.12.3.0 255.255.0.0 Fa0/0
- C) A(config)#ip route 10.10.5.0 255.0.0.0 S0/1/0 and B(config)#ip route 168.12.3.0 255.255.0.0 Fa0/0
- D) A(config)#ip route 168.12.3.0 255.255.0.0 Fa0/0 and B(config)#ip route 168.12.3.0 255.255.0.0 Serial0/0/0

33) Consider the switch fragment configuration.

```
Switch# Show running-config  
<Result is omitted>  
line con 0  
password cisco  
login  
<Result is omitted>
```

The configuration presented in the fragment above allows to limit the access to\_\_\_\_\_.

- A) configuration mode
- B) privileged exec mode
- C) devices used by telnet
- D) devices through the console connection

34) What is the implicit statement used at the end of an ACL list? The \_\_\_\_\_ statement.

- A) deny ip any
- B) deny tcp any
- C) deny any any
- D) permit any any

35) For block a third layer range address in an extended ACL, one must use the\_\_\_\_\_.

- A) out interface
- B) in interface
- C) net mask
- D) wildcard

36) Read the information about Network Design and Representation.

It studies the different ways to enroll the dimensions of the parts in the drawings. There are two types: situational and dimensional.

What concept refers to the information above?

- A) Scales
- B) Labeling
- C) Bounded
- D) Desigment

37) What kind of configuration must be used in the cable that connects two joint computers together without an additional device?

- A) Direct
- B) Vertical
- C) Horizontal
- D) Crossover



38) Consider the illustration.



According to the T568B standardization norm, where is the pin number one located on the RJ45 connector shown in the illustration above?

- A) Intermediate
- B) Center
- C) Right
- D) Left

39) Read the information.

This type of cable is formed by a central covered glass cylinder, known as covering. Its size is measured by micrometers. It has two components, the core diameter and the sheathing diameter.

What kind of data transmission cable is presented in the information above?

- A) Unshielded pair twisted
- B) Shielded pair twisted
- C) Optical fiber
- D) Coaxial

40) Read the information.

- I. Plan considering the future growth.
- II. Find the complete solution of connectivity.
- III. Consider strengths of the computer department.
- IV. Obey business guidelines for the purchasing of regulated material.

According to the previous information, what numbers identify rules for structured wiring of the LAN?

- A) I and II
- B) I and III
- C) II and IV
- D) II and III

41) Read the information.

- I. It establishes the demarcation between voice and data wiring.
- II. It represents the network servers distribution, routers and switches.
- III. It is the point where external wiring of the service provider is connected to the backbone into the building.
- IV. It represents the limit between the responsibility of the service provider and the customer's responsibility.

Based on to previous information, what numbers identify the demarcation point according to structured standard wiring?

- A) II and III
- B) I and IV
- C) II and III
- D) III and IV

42) Read the information.

- I. It provides cable connections sending all the signals of entrances to the rest of the ports.
- II. It eliminates the attenuation presented in the data media transmissions.
- III. It increases the segments received from different ports.
- IV. It increases the segment length of the LAN.

According to previous information, what numbers identify the repeater?

- A) I and III
- B) I and IV
- C) II and III
- D) II and IV

43) Read the information.

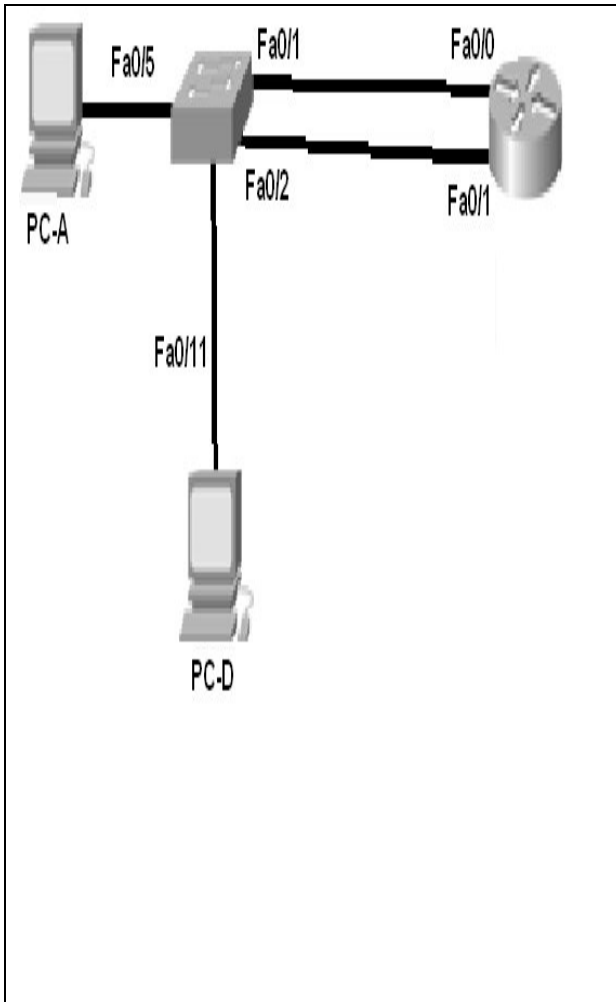
Use bus topology with coaxial cable. The workstation is connected to the media through transceivers. The maximum distance covered of the segment is 500 meters, although repeaters can be added to increase the reach.

Taken from: Redes de Area Local, GS Comunicaciones, p 77

What media transmission refers to the information above?

- A) 10 Base F
- B) 10 Base 2
- C) 10 Base 5
- D) 10 Base T

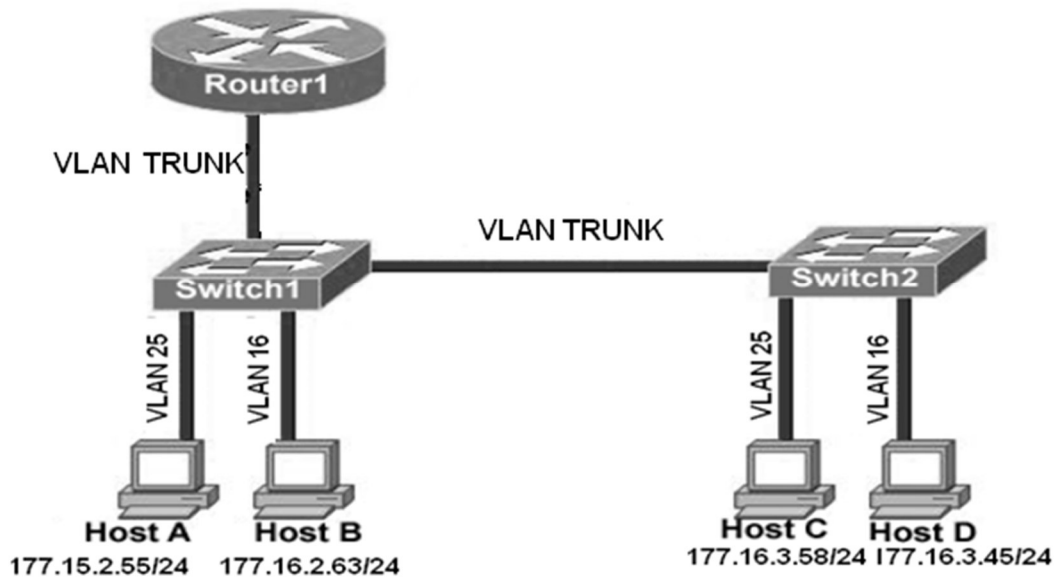
44) Consider the information.

 <p>The diagram shows a network topology. On the left, PC-A is connected to a switch at interface Fa0/5. The switch has two links to a router: Fa0/1 and Fa0/2. The router has Fa0/0 and Fa0/1. Below the switch, PC-D is connected to the switch at interface Fa0/11.</p>	<p>In the router:</p> <pre>&lt;Result is omitted&gt; interface FastEthernet0/0 ip address 177.15.2.1 255.255.255.0 &lt;Result is omitted&gt; interface FastEthernet0/1 ip address 192.168.8.1 255.255.255.0 &lt;Result is omitted&gt;</pre> <p>In the switch:</p> <pre>&lt;Result is omitted&gt; interface FastEthernet0/1 switchport access vlan 10 switchport mode access interface FastEthernet0/2 switchport access vlan 10 switchport mode access interface FastEthernet0/3 switchport access vlan 20 switchport mode access &lt;Result is omitted&gt; interface FastEthernet0/5 switchport access vlan 10 switchport mode access interface FastEthernet0/11 switchport access vlan 20 switchport mode access &lt;Result is omitted&gt;</pre>
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According to previous information, the PC-A can make a successful ping to its gateway; however the PC-D can not. What could be causing the problem?

- A) The switch trunk ports have been assigned incorrectly.
- B) The router must be configured as a router on a stick.
- C) The configuration of vlans is incorrect.
- D) The third layer routing is incorrect.

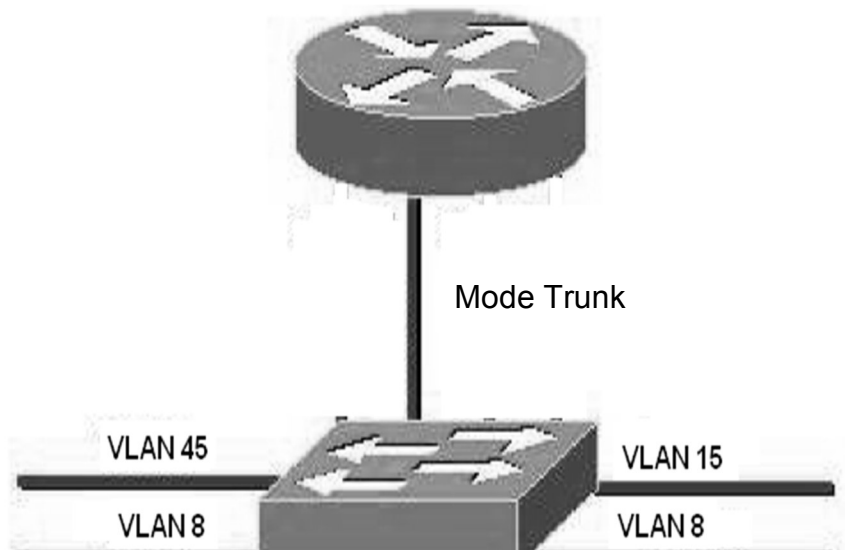
45) Consider the figure.



Host B and Host D in the illustration above belong to the same VLAN. However, there is no communication between them. What is the probable cause that produces this failure?

- A) Routing between VLAN and router is trunked because it is not on a stick.
- B) The link between switches is active but not in form of a trunk.
- C) Host B is assigned to a different VLAN preventing routing.
- D) The addressing in the third layer is misconfigured.

46) Consider the illustration.



According to the illustration above, the following option belongs to Mode Trunk\_\_\_\_\_

- A) all the vlans.
- B) the vlan 45.
- C) the vlan 15.
- D) the vlan 8.

47) Read the list on routing protocols.

- |      |       |
|------|-------|
| I.   | EIGRP |
| II.  | RIPv2 |
| III. | RIPv1 |
| IV.  | IGRP  |

According to the list above, which numbers identify protocols not supporting VLSM?

- A) III and IV
- B) II and IV
- C) I and III
- D) I and II

48) Read the information.

Falcons Company S.A has three new departments. Web Design, Network Design and Network Devices. Each department, respectively, has 15, 25 and 38 employees.

A Network administrator needs to divide class C network among the new departments of Falcons Company S.A. According to the previous information, which are the network mask needed in the third level routing for each department, respectively?

- A) 255.255.255.192 – 255.255.255.158 – 255.255.255.240
- B) 255.255.255.224 – 255.255.255.240 – 255.255.255.252
- C) 255.255.255.224 – 255.255.255.224 – 255.255.255.192
- D) 255.255.255.256 – 255.255.255.224 – 255.255.255.252

49) Consider the illustration.



A network administrator needs to create a subnet between router A and D in the illustration above. With the minimum of spoilage addresses, which subnet mask can offer third layer routing between routers?

- A) 255.255.255.224
- B) 255.255.255.240
- C) 255.255.255.248
- D) 255.255.255.252

50) Consider the IPv4 address.

172.16.37.255/24

The above address corresponds to a \_\_\_\_\_ address.

- A) valid host
- B) broadcast
- C) gateway
- D) net

51) The interface serial 0/0/0 of a router an address has been assigned with an IP address to 172.16.80.2/30. Which subnet does the IP address belong to?

- A) 172.16.80.224
- B) 172.16.80.192
- C) 172.16.80.128
- D) 172.16.80.0

52) Read the definition.

It is a device that works as a central connection point for devices in a LAN.

Which device referred to the information above?

- A) Hub
- B) Cube
- C) Router
- D) Bridge

53) Read the information about Quality Culture.

Thoughts are generated in a groupal atmosphere. People who form a group express their thinking when it is their turn, otherwise they must wait for the next turn. Another way of working is when individuals or groups express their thoughts as they think.

Which tools for continuous improvement the previous information refer to?

- A) Cause-effect diagram
- B) Flow diagram
- C) Pareto chart
- D) Brainstorm



54) Read the information about security.

Events or attacks that consist of robbery, damage or destruction of equipment such as servers, switches and cables.

What kind of IT security the information above refers to?

- A) Physical
- B) Logical
- C) Digital
- D) Data

55) Read the information.

I. It allows internal fragmentation into page frame.  
II. It splits programs into unequal segmentation.  
III. It divides programs into pages of equal size.  
IV. It offers external segmentation.

According to previous information, which numbers identify the paged virtual memory?

- A) I and II
- B) I and III
- C) II and IV
- D) III and IV

56) Read the information about network operating system.

I. It obtains the highest performance in the processes, segmenting the runtime of applications on the server.  
II. It is used in environments where there must be a large number of events accepted and processed, mostly by external situations to computer system.  
III. The resources of the network should appear as extensions of the user's existing system.  
IV. Its main function is to allow users to access hardware and software remotely.

According to previous information, which numbers identify the Network operating system?

- A) III and IV
- B) II and III
- C) I and III
- D) I and II

57) Read the information.

- I. It allows full control of the computer.
- II. The processes are synchronized using blocks called mutex.
- III. The channel is used for communication between processes.
- IV. The lack of security measures a characteristic of the multitask system.

According to previous information, which numbers identify the MS-DOS operating system?

- A) I and II
- B) I and IV
- C) II and III
- D) III and IV

58) The native command of Windows operating system that permits to add, modify or display the names of messages is known as\_\_\_\_\_.

- A) net start
- B) net share
- C) net config
- D) net name

59) Read the following information about network operating system requirements.

- I. It requires a minimum 512 Gb of RAM.
- II. It must have 133 Mhz processing speed.
- III. It must have at least 1Ghz in the speed processor.
- IV. It needs 4Gb of free space on hard disk for installation.

According to the previous information, which numbers identify requirements for network installation operating system in Windows 2008 Sever Standard?

- A) I and III
- B) I and IV
- C) II and III
- D) II and IV

Read the text.

### **Important Tips when Dealing with the Internet**

Here are some important tips in order to have better results when using the Internet. First, only download media and software from trusted sources. Viruses, trojans and spyware are often transferred between computers and users through downloaded programs. Read reviews before you download a free program, or check with someone you know for a personal review beforehand. Make sure anything you download and store on your computer has the appropriate copyright and is legal for you to have.

**Adapted from [www.ehow.com](http://www.ehow.com)**

- 60) Based on the text, it is advisable to download \_\_\_\_\_.
- A) programs from well-known websites
  - B) programs without any restriction
  - C) softwares without copyrights
  - D) softwares from any website

Read the text.

### **Personal Digital Assistants**

PDA (personal digital assistant) is a term for any small mobile hand-held device that provides computing and information storage and retrieval capabilities for personal or business use. Most PDAs have a small keyboard. Some PDAs have an electronically sensitive pad on which handwriting can be received. Apple's Newton, which has been withdrawn from the market, was the first widely-sold PDA that accepted handwriting.

**Adapted from [www.techtarget.com](http://www.techtarget.com)**

- 61) Based on the previous text, the Apple's Newton was the first PDA to \_\_\_\_\_.
- A) permit users to handwrite
  - B) permit users to plan schedules
  - C) allow people to store information
  - D) allow people to make phone calls

62) Considere el siguiente enunciado lógico:

$$P \Rightarrow P \wedge P$$

El enunciado anterior corresponde a una

- A) tautología.
- B) disyunción.
- C) contingencia.
- D) contradicción.

63) A continuación se presenta la siguiente **tabla de verdad**:

P	Q	$[(P \Rightarrow Q) \Rightarrow Q] \Rightarrow Q$
V	V	
V	F	
F	V	
F	F	

La tabla anterior es un ejemplo de

- A) equivalencia material.
- B) contradicción.
- C) tautología.
- D) negación.

64) Considere el siguiente número en el sistema hexadecimal:

$$358_{16}$$

¿Cuál es su valor decimal, realizando la conversión respectiva?

- A) 192
- B) 224
- C) 856
- D) 1 024

65) Considere la información que se presenta en el siguiente mapa de Karnaugh:

	CD			
AB	1	1	0	0
	1	1	0	0
	1	1	1	1
	1	1	1	1

El resultado de la simplificación utilizando el mapa anterior corresponde a

- A)  $\bar{C} + A$
- B)  $\bar{D} + \bar{B}$
- C)  $D + \bar{B}$
- D)  $ABC\bar{C} + AD$

66) Considere el siguiente programa escrito en pseudocódigo:

```

Proceso ejercicio_1
  suma ← 0
  Desde indice ← 1 Hasta 6 Hacer
    resto ← indice mod 2
    Si resto=0
      entonces numero ← indice + 1
    sino numero ← indice + 2
    FinSi
    suma ← suma + numero
  Fin_desde
  Escribir (suma)
FinProceso
  
```

¿Cuál es el valor de salida correcto, según el programa anterior?

- A) 11
- B) 16
- C) 23
- D) 30

67) Considere el siguiente programa escrito en pseudocódigo:

```
Proceso Ejercicio02
veces ← 1
suma ← 0
Mientras veces <=4 Hacer
    numero ← veces + 2
    total ← 1
    Desde indice ← 1 Hasta veces Hacer
        total ← total * indice
    suma ← suma + total
    veces ← veces + 1
FinMientras
Escribir (suma)
FinProceso
```

¿Cuál es el valor de salida correcto, según el programa anterior?

- A) 1
- B) 3
- C) 9
- D) 33

68) Lea el siguiente texto:

Representa un conjunto de uno o más atributos que juntos permiten identificar de forma única a una entidad dentro del conjunto de entidades.

¿A cuál elemento asociado a una base de datos hace referencia el texto anterior?

- A) Registro
- B) Diagramas
- C) Relaciones
- D) Super llave

69) Considere el siguiente pseudocódigo. El parámetro de entrada en la función denominada Funcion\_3 es por referencia.

```
Inicio
  Entero valor, elemento

  elemento ← 1
  valor ← 1
  Mientras (valor <=4) Hacer
    Llamar funcion_3(elemento)
    valor ← valor + 1
  Fin_mientras
  Escribir(valor)
Fin

Entero Funcion Funcion_3(E/S Entero Numero)
  Inicio
    Numero ← Numero + 3
    Devolver Numero
  Fin_funcion
```

¿Cuál es el valor de salida correcto, según el pseudocódigo anterior?

- A) 3
- B) 5
- C) 7
- D) 9

70) En el modelo entidad-relación, las características de una entidad recibe el nombre de

- A) datos.
- B) archivos.
- C) atributos.
- D) relaciones.

71) Considere el siguiente pseudocódigo. El parámetro de entrada a la función denominada función\_1 es por referencia.

```
Inicio
  Entero Valor

  Valor ← 5
  Llamar funcion_1(Valor)
  Escribir (Valor)
Fin

Real Funcion  funcion_1(E/S Entero Numero)
Inicio
  Entero indice

  Desde indice ← 1 hasta 2 Hacer
    Numero ← Numero * indice
  Fin_desde
  Devolver Numero
Fin_funcion
```

¿Cuál es el valor de salida correcto, según el pseudocódigo anterior?

- A) 5
- B) 10
- C) 15
- D) 20



72) Considere el siguiente fragmento de programa escrito en pseudocódigo:

```
Clase Area()  
  Privado  
    Entero tipo  
  Publico  
    Area( Entero tipo_area)  
      Inicio  
        Hacer tipo=tipo_area  
      Fin  
    Calcular( Entero tipo_Figura, valor)  
      Entero Resultado  
      Inicio  
        Segun_sea tipo_Figura hacer  
          1:Hacer Resultado= valor * valor  
          2:Hacer Resultado=valor * 4  
          3:Hacer Resultado=(valor * 2) + (valor * 4)  
        Fin_segun  
      Fin  
Fin_clase  
  
Clase Verifica_Calculo hereda de Area  
  Entero dato  
  Verifica_Calculo(Entero Resultado)  
  Inicio  
    Hacer dato=Resultado  
  Fin  
  Imprimir()  
  Inicio  
    Escribir(dato)  
  Fin  
Fin_Clase  
  
Inicio  
  Verifica_Calculo Areas  
  Areas.calcular(1,8)  
  Areas.imprimir()  
Fin
```

¿Cuál es el valor de salida correcto, según el fragmento de programa anterior?

- A) 24
- B) 32
- C) 48
- D) 64

- 73) Considere el siguiente fragmento de programa escrito en pseudocódigo. La variable denominada numeros es una estructura lineal que almacena los valores de 1, 2, 3, 4, 5,6 y 7 respectivamente:

```
Clase miClase Inicio
    Entero valor_1
Publico
    miClase () Inicio
        valor_1=0
    Fin
    miClase (entero valor_2) Inicio
        valor_1=valor_2
    Fin
    Entero método() Inicio
        Retorne (valor_1 * 2)
    Fin
Fin

Inicio
    miClase numeros
    Entero indice
    Desde indice=1 hasta 3 hacer
        numeros [indice * 2].método()
Fin
```

¿Cuáles son los valores de salida correctos, según el fragmento de programa anterior?

- A) 4 4, 6
- B) 4 8, 12
- C) 4, 6, 14
- D) 4, 10, 14

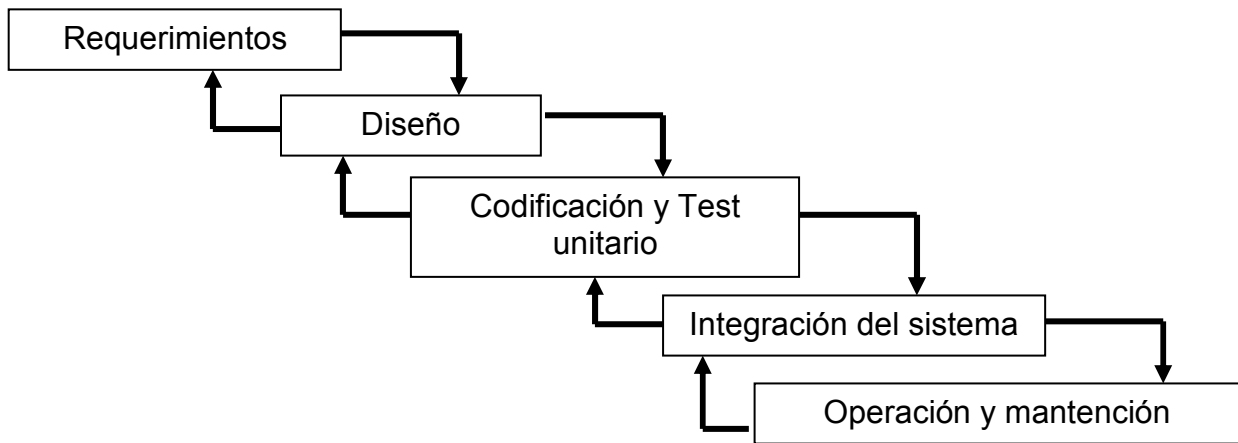
74) Asocie los componentes de la columna A sobre los elementos que conforman un análisis FODA con su respectiva descripción dentro de la empresa de la columna B.

Columna A	Columna B
I. Oportunidades	P. Nuevos métodos o procesos tecnológicos
II. Debilidades	Q. Los servicios son ineficientes
III. Amenazas	R. Cambios en el mercado
IV. Fortalezas	S. Personal calificado

¿Cuál es la forma correcta de asociar ambas columnas?

- A) I P - II Q - III R - IV S
- B) I S - II P - III Q - IV R
- C) I R - II S - III P - IV Q
- D) I Q - II R - III S - IV P

75) Observe el siguiente esquema sobre principios básicos del desarrollo de proyectos informáticos:



¿Qué tipo de diseño de un proyecto informático hace referencia el esquema anterior?

- A) Cascada
- B) Prototipado
- C) Entrega Evolutiva
- D) Entrega por etapas

# SOLUCIONARIO

Item	Respuesta	Item	Respuesta	Item	Respuesta	Item	Respuesta
1	<b>C</b>	21	<b>A</b>	41	<b>D</b>	61	<b>A</b>
2	<b>A</b>	22	<b>D</b>	42	<b>D</b>	62	<b>C</b>
3	<b>A</b>	23	<b>D</b>	43	<b>C</b>	63	<b>C</b>
4	<b>A</b>	24	<b>A</b>	44	<b>A</b>	64	<b>A</b>
5	<b>B</b>	25	<b>B</b>	45	<b>D</b>	65	<b>D</b>
6	<b>A</b>	26	<b>C</b>	46	<b>A</b>	66	<b>D</b>
7	<b>A</b>	27	<b>A</b>	47	<b>A</b>	67	<b>D</b>
8	<b>D</b>	28	<b>B</b>	48	<b>C</b>	68	<b>D</b>
9	<b>A</b>	29	<b>A</b>	49	<b>D</b>	69	<b>B</b>
10	<b>A</b>	30	<b>B</b>	50	<b>B</b>	70	<b>C</b>
11	<b>A</b>	31	<b>B</b>	51	<b>D</b>	71	<b>B</b>
12	<b>C</b>	32	<b>A</b>	52	<b>A</b>	72	<b>D</b>
13	<b>C</b>	33	<b>D</b>	53	<b>D</b>	73	<b>B</b>
14	<b>D</b>	34	<b>C</b>	54	<b>A</b>	74	<b>A</b>
15	<b>B</b>	35	<b>D</b>	55	<b>B</b>	75	<b>A</b>
16	<b>D</b>	36	<b>A</b>	56	<b>A</b>		
17	<b>C</b>	37	<b>D</b>	57	<b>B</b>		
18	<b>C</b>	38	<b>D</b>	58	<b>D</b>		
19	<b>A</b>	39	<b>C</b>	59	<b>A</b>		
20	<b>A</b>	40	<b>A</b>	60	<b>A</b>		