Question 1

Marks: 2

With TCP/IP data encapsulation, which range of port numbers identifies all well-known applications?

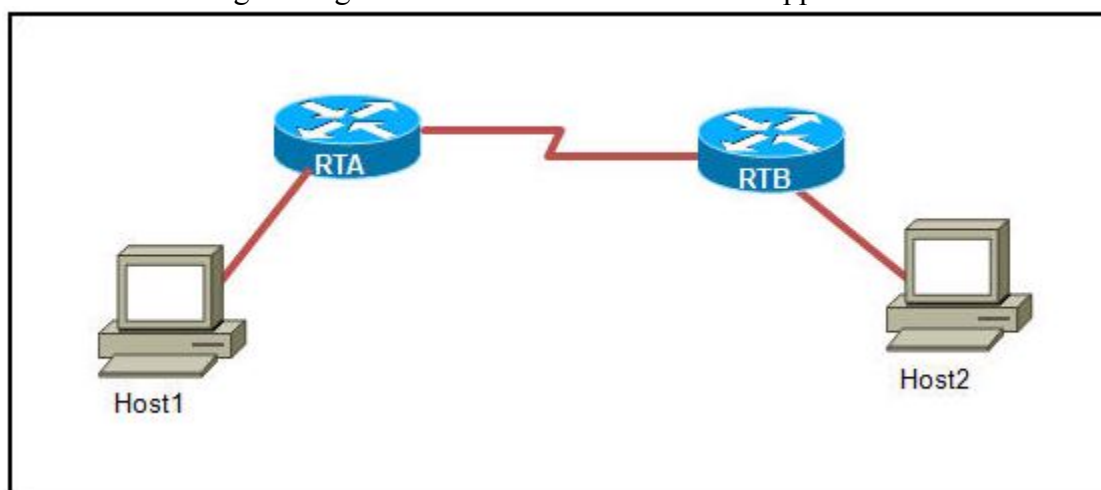Choose one answer.

	1024 to 2047
	0 to 255
	0 to 1023
	256 to 1022
	49153 to 65535

Question 2

Marks: 2

Refer to the exhibit. Host1 is in the process of setting up a TCP session with Host2. Host1 has sent a SYN message to begin session establishment. What happens next?

Choose one answer.

	Host2 sends a segment with the ACK flag = 0, SYN flag = 1 to Host1.
	Host1 sends a segment with the ACK flag = 1, SYN flag = 1 to Host2.
	Host1 sends a segment with the ACK flag = 0, SYN flag = 0 to Host2.
	Host1 sends a segment with the ACK flag = 1, SYN flag = 0 to Host2.
	Host2 sends a segment with the ACK flag = 1, SYN flag = 0 to Host1.
	Host2 sends a segment with the ACK flag = 1, SYN flag = 1 to Host1.

Question 3

Marks: 2

After a web browser makes a request to a web server that is listening to the standard port, what will be the source port number in the TCP header of the response from the server?

Choose one answer.

	80
	1024

	53
	1728
	13

Question 4

Marks: 2

Which is an important characteristic of UDP?

Choose one answer.

	minimal delays in data delivery
	high reliability of data delivery
	acknowledgement of data delivery
	same order data delivery

Question 5

Marks: 2

What mechanism is used by TCP to provide flow control as segments travel from source to destination?

Choose one answer.

	acknowledgments
	window size
	sequence numbers
	session establishment

Question 6

Marks: 3

Which three features allow TCP to reliably and accurately track the transmission of data from source to destination? (Choose three.)

Choose at least one answer.

	best effort delivery
	session establishment
	urgent pointer
	numbering and sequencing
	connectionless services
	flow control

Question 7

Marks: 2

Which information is found in both the TCP and UDP header information?

Choose one answer.

	sequencing
	acknowledgments
	source and destination port
	flow control

Question 8

Marks: 2

What is dynamically selected by the source host when forwarding data?

Choose one answer.

	default gateway address
	destination logical address
	source physical address
	source port

Question 9

Marks: 2

Based on the transport layer header shown in the diagram, which of the following statements describe the established session? (Choose two.)

Bit 0		Bit 15 Bit 16	Bit 31
Source Port 13357		Destination Port 23	
Sequence Number 43693			
Acknowlegement Number 8732			
Header Length--	Reserved -- Code Bits --	Window 12000	
Checksum ---		Urgent ---	

Choose at least one answer.

	This is a UDP header.
	This contains a TFTP data transfer.
	This is a TCP header.
	The return packet from this remote host will have an Acknowledgement Number of 43693.
	This contains a Telnet request.

Question 10

Marks: 2

Which two options represent Layer 4 addressing? (Choose two.)

Choose at least one answer.

	identifies multiple conversations between the hosts
	identifies the devices communicating over the local media
	identifies the communicating applications
	identifies source and destination hosts
	identifies the destination network

Question 11

Marks: 2

What are two features of the User Datagram Protocol (UDP)? (Choose two.)

Choose at least one answer.

	low overhead
	flow control
	connection-oriented
	sequence and acknowledgements
	connectionless

Question 12
Marks: 2
Refer to the exhibit. What two pieces of information can be determined from the output that is shown? (Choose two.)

```
C:\> netstat -n

Active Connections

  Proto  Local Address          Foreign Address       State
  TCP    192.168.1.101:1031     64.100.173.42:443     ESTABLISHED
  TCP    192.168.1.101:1037     192.135.250.10:110    TIME_WAIT
  TCP    192.168.1.101:1042     128.107.229.50:80     ESTABLISHED
```

Choose at least one answer.

	The local host is listening for TCP connections using public addresses.
	The local host is using three client sessions.
	The local host is performing the three-way handshake with 192.168.1.101:1037.
	The local host is using well-known port numbers to identify the source ports.
	The local host is using web sessions to a remote server.

Question 13
Marks: 2
Which OSI model layer is responsible for regulating the flow of information from source to destination, reliably and accurately?
Choose one answer.

	network
	presentation
	session
	application
	transport

Question 14
Marks: 2
Why are port numbers included in the TCP header of a segment?
Choose one answer.

	to identify which switch ports should receive or forward the segment
	to indicate the correct router interface that should be used to forward a segment
	to enable a receiving host to forward the data to the appropriate application
	to determine which Layer 3 protocol should be used to encapsulate the data
	to allow the receiving host to assemble the packet in the proper order

Question 15
Marks: 2
Refer to the exhibit. In line 7 of this Wireshark capture, what TCP operation is being performed

```
No. -   Time       Source            Destination      Protocol  Info
  5 0.102309  Cisco_3c:78:00    Broadcast        ARP       who has 198.133.219.25?  Tell 10.21.148.177
  6 0.102351  Cisco_b6:ce:04    Cisco_3c:78:00   ARP       198.133.219.25 is at 00:08:a3:b6:ce:04
  7 0.102368  10.21.148.177     198.133.219.25   TCP       3351 > http [SYN] Seq=0 Len=0 MSS=1260
  8 0.176454  198.133.219.25    10.21.148.177    TCP       http > 3351 [SYN, ACK] Seq=0 Ack=1 Win=8192 Len=0 MSS=1380
  9 0.176519  10.21.148.177     198.133.219.25   TCP       3351 > http [ACK] Seq=1 Ack=1 Win=65520 Len=0
 10 0.176619  10.21.148.177     198.133.219.25   HTTP      GET / HTTP/1.1
 11 0.257134  198.133.219.25    10.21.148.177    TCP       http > 3351 [ACK] Seq=1 Ack=1180 Win=7074 Len=0
 12 0.271676  198.133.219.25    10.21.148.177    TCP       [TCP segment of a reassembled PDU]

⊟ Frame 7 (62 bytes on wire, 62 bytes captured)
⊞ Ethernet II, Src: Cisco_3c:78:00 (00:05:9a:3c:78:00), Dst: Cisco_b6:ce:04 (00:08:a3:b6:ce:04)
⊞ Internet Protocol, Src: 10.21.148.177 (10.21.148.177), Dst: 198.133.219.25 (198.133.219.25)
⊟ Transmission Control Protocol, Src Port: 3351 (3351), Dst Port: http (80), Seq: 0, Len: 0
    Source port: 3351 (3351)
    Destination port: http (80)
    Sequence number: 0    (relative sequence number)
    Header length: 28 bytes
  ⊟ Flags: 0x02 (SYN)
      0... .... = Congestion Window Reduced (CWR): Not set
      .0.. .... = ECN-Echo: Not set
      ..0. .... = Urgent: Not set
      ...0 .... = Acknowledgment: Not set
      .... 0... = Push: Not set
      .... .0.. = Reset: Not set
      .... ..1. = Syn: Set
      .... ...0 = Fin: Not set
    Window size: 64512
```
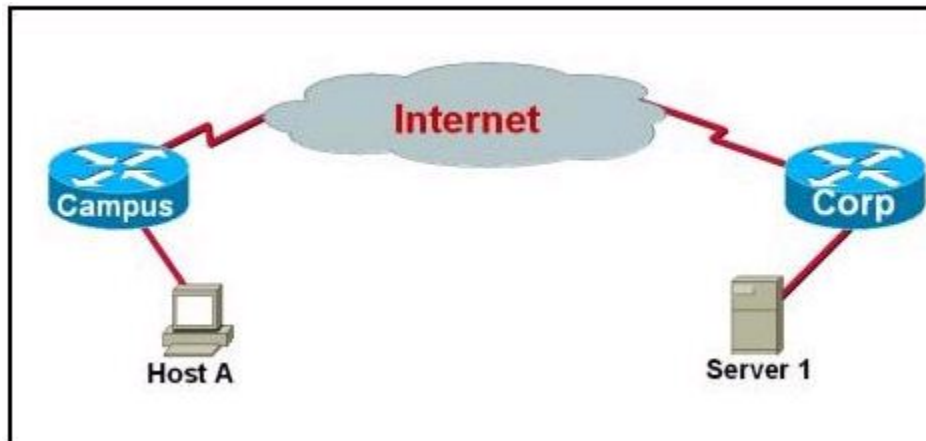
Choose one answer.

	session establishment
	session disconnect
	data transfer
	segment retransmit

Question 16
Marks: 2

Refer to the exhibit. Host A is using FTP to download a large file from Server 1. During the download process, Server 1 does not receive an acknowledgment from Host A for several bytes of transferred data. What action will Server 1 take as a result?

Choose one answer.

	reach a timeout and resend the data that needs to be acknowledged
	create a Layer 1 jam signal
	send a RESET bit to the host
	change the window size in the Layer 4 header

Question 17
Marks: 2

Why is flow control used for TCP data transfer?

Choose one answer.

	to simplify data transfer to multiple hosts
	to synchronize window size on the server
	to synchronize and order sequence numbers so data is sent in complete numerical order
	to prevent the receiver from being overwhelmed by incoming data
	to synchronize equipment speed for sent data

Question 18

Marks: 2

Which event occurs during the transport layer three-way handshake?

Choose one answer.

	The two applications exchange data.
	UDP establishes the maximum number of bytes to be sent.
	TCP initializes the sequence numbers for the sessions.
	The server acknowledges the bytes of data received from the client.

Question 19

Marks: 2

Which transport layer protocol provides low overhead and would be used for applications which do not require reliable data delivery?

Choose one answer.

	IP
	HTTP
	UDP
	DNS
	TCP

Question 20

Marks: 2

During a TCP communication session, if the packets arrive to the destination out of order, what will happen to the original message?

Choose one answer.

	The packets will not be delivered.
	The packets will be retransmitted from the source.
	The packets will be delivered and reassembled at the destination.
	The packets will be delivered and not reassembled at the destination.