



3+



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Started on Wednesday, 1 May 2019, 4:26 PM

State Finished

Completed on Wednesday, 1 May 2019, 4:33 PM

Time taken 6 mins 51 secs

Marks 30.00/30.00

Grade 10.00 out of 10.00 (100%)

Question 1

Correct

Mark 1.00 out of 1.00

A router performs routing when a data packet arrives.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question 2

Correct

Mark 1.00 out of 1.00

When a packet arrives, a router performs forwarding.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **3**

Correct

Mark 1.00 out of 1.00

Longest Prefix Matching is performed by routing software.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **4**

Correct

Mark 1.00 out of 1.00

To perform forwarding, a router needs to perform routing first.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **5**

Correct

Mark 1.00 out of 1.00

Routing tables are copied at every output port.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **6**

Correct

Mark 1.00 out of 1.00

To perform forwarding, a router must inspect the source address in the arriving packet's header.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **7**

Correct

Mark 1.00 out of 1.00

Routing table is copied to each input port

Select one:

- ☐ a. to achieve redundancy
- ☒ b. to speed up table lookup ✓
- ☐ c. to increase forwarding accuracy
- ☐ d. to avoid head of line blocking

Your answer is correct.

The correct answer is: to speed up table lookup

Question **8**

Correct

Mark 1.00 out of 1.00

in a router, packets can be queued

Select one:

- ☐ a. only at input ports
- ☐ b. only at output ports
- ☒ c. at both input and output ports ✓
- ☐ d. inside the switching fabric

Your answer is correct.

The correct answer is: at both input and output ports

Question **9**

Correct

Mark 1.00 out of 1.00

Ternary content addressable memories (TCAMs) are used by routers

Select one:

- ☐ a. to store more complex routes
- ☒ b. to speed up the process of longest prefix matching ✓
- ☐ c. to improve storage reliability
- ☐ d. to increase memory capacity

Your answer is correct.

The correct answer is: to speed up the process of longest prefix matching

Question **10**

Correct

Mark 1.00 out of 1.00

Routers need switching fabric to move packets from output buffer/port to input buffer/port

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **11**

Correct

Mark 1.00 out of 1.00

Output ports in routers would not require buffering if the transmission links were faster than the total capacity of the switching fabric

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **12**

Correct

Mark 1.00 out of 1.00

Head of line blocking cannot occur at output port buffers.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **13**

Correct

Mark 1.00 out of 1.00

An link scheduler in a router

Select one:

- ☐ a. is required to speed up packet forwarding
- ☒ b. can help prioritise transmission of packets carrying data from different types of services ✓
- ☐ c. makes sure that no packet is dropped
- ☐ d. always transmit packets from the head of the queue

Your answer is correct.

The correct answer is: can help prioritise transmission of packets carrying data from different types of services

Question **14**

Correct

Mark 1.00 out of 1.00

IP packet fragmentation

Select one:

- ☐ a. helps speed up data delivery in the Internet
- ☐ b. cannot be avoided
- ☒ c. can be avoided by controlling TCP segment size ✓
- ☐ d. can be avoided by configuring the maximum transfer unit (MTU) of the underlying link layer.

Your answer is correct.

The correct answer is: can be avoided by controlling TCP segment size

Question **15**

Correct

Mark 1.00 out of 1.00

Each network interface of a host must be configured with an IP address.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **16**

Correct

Mark 1.00 out of 1.00

A laptop can assume only one IP address at a time.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **17**

Correct

Mark 1.00 out of 1.00

Two hosts connected to the same subnet can reach each other without the help of a router.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **18**

Correct

Mark 1.00 out of 1.00

In the original "classful" addressing scheme, the network address part of the 32-bit IP address could have a maximum of

Select one:

- ☐ a. 8 bits
- ☐ b. 10 bits
- ☐ c. 16 bits
- ☒ d. 24 bits ✓

Your answer is correct.

The correct answer is: 24 bits

Question **19**

Correct

Mark 1.00 out of 1.00

In today's CIDR addressing scheme, the subnet part of the 32-bit IP address

Select one:

- ☐ a. can only have 24 bits
- ☐ b. must be at least 8 bits long
- ☐ c. can have maximum length of 28 bits
- ☒ d. can have arbitrary length ✓

Your answer is correct.

The correct answer is: can have arbitrary length

Question **20**

Correct

Mark 1.00 out of 1.00

Classful addressing scheme could work without the help of subnet masks

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **21**

Correct

Mark 1.00 out of 1.00

CIDR addressing scheme could work without the help of subnet masks

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **22**

Correct

Mark 1.00 out of 1.00

How many IP addresses belong to the subnet 128.119.254.0/26?

Select one:

- ☐ a. 16
- ☐ b. 32
- ☒ c. 64 ✓
- ☐ d. 128

Your answer is correct.

The correct answer is: 64

Question **23**

Correct

Mark 1.00 out of 1.00

What are the IP addresses at the two end-points of the subnet 128.119.254.0/26 ?

Select one:

- ☒ a. 128.119.254.0 and 128.119.254.63 ✓
- ☐ b. 128.119.254.0 and 128.119.254.128
- ☐ c. 128.119.254.63 and 128.119.254.128
- ☐ d. 128.119.254.0 and 128.119.254.64

Your answer is correct.

The correct answer is: 128.119.254.0 and 128.119.254.63

Question **24**

Correct

Mark 1.00 out of 1.00

Without DHCP, a host cannot be configured with an IP address.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **25**

Correct

Mark 1.00 out of 1.00

From IP address, one can guess the geographic location of the device.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **26**

Correct

Mark 1.00 out of 1.00

The two subnets 128.119.245.129/25 and 128.119.245.4/26 have overlapping IP addresses.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **27**

Correct

Mark 1.00 out of 1.00

One of the advantages of NAT is that the organisation can change addresses of the devices within its local network without notifying the outside world

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **28**

Correct

Mark 1.00 out of 1.00

NAT violates layering principle.

Select one:

- ☒ True ✓
- ☐ False

The correct answer is 'True'.

Question **29**

Correct

Mark 1.00 out of 1.00

For NAT to work, we need at least two public IP addresses.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.

Question **30**

Correct

Mark 1.00 out of
1.00

NAT manipulates TCP port numbers to improve data security.

Select one:

- ☐ True
- ☒ False ✓

The correct answer is 'False'.