



قائمة الاسئلة

امتحان نهاية الفصل الدراسي الأول - للعام الجامعي 1446 هـ - الموافق 2025/2024 مكلية الحاسوب وتكنولوجيا المعلومات :: مبادئ شبكات
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- 1) مجموعة القواعد التي يجب أن يتبعها المرسل والمستقبل تسمى
- ist the collection of rules that the sender and receiver are required to transfer data/inofmation
 - 1) ☒ A protocol
 - 2) ☐ A message
 - 3) ☐ A medium
 - 4) ☐ All statements are false
- 2) In a mesh topology:
 - 1) ☒ Every device is connected to every other device
 - 2) ☐ All devices are connected to a central hub
 - 3) ☐ Devices are connected in a linear fashion
 - 4) ☐ Devices are connected in a circular fashion
- 3) The IP 01000001 10101111 00001111 10111011 in Class A
 - 1) ☐ Ture
 - 2) ☒ Fals
- 4) The last Abbreviation of 0000:0000:0000:1F1F:0000:0000:00A9:1234 is: هو التالي للعنوان الاختصار
 - 1) ☐ 3FFE:1F1F::A9:1234
 - 2) ☐ 3FFE:0:01F1F::A9:1234
 - 3) ☐ 3FFE:0000:1F1F::A9:1234
 - 4) ☒ All statement are not correct
- 5) الطبقة المسؤولة عن تحويل البيانات الرقمية الى إشارات
The layer responsible for converting digital data into signals is:
 - 1) ☐ Application
 - 2) ☐ Presentation
 - 3) ☐ Session
 - 4) ☒ Physical
- 6) Multiplexing done at:
 - 1) ☒ The source
 - 2) ☐ The destination
 - 3) ☐ Both the source and the destination
 - 4) ☐ Neither the source nor the destination
- 7) The unit of data exchange at the transport layer is:
 - 1) ☐ A bit
 - 2) ☒ A Segment
 - 3) ☐ A packet
 - 4) ☐ A frame
- 8) Examples of guided (Wired) media include:
 - 1) ☒ Twisted-pair cable, coaxial cable, and fiber-optic cable
 - 2) ☐ Radio waves, microwaves, and infrared light
 - 3) ☐ Twisted-pair cable, microwaves, and fiber-optic cable
 - 4) ☐ All statements are false
- 9) The destination addresses B4:30:10:21:10:1A is :
 - 1) ☐ Broadcast
 - 2) ☐ . Multicast
 - 3) ☒ Unicast
 - 4) ☐ All statements are false
- 10) عنوان المنفذ



A port address is

- 1) ☒ 16-bit address
- 2) ☐ 6-byte address
- 3) ☐ 12 hexadecimal digits
- 4) ☐ 32-bit address

11) Logical addresses are used to:

- 1) ☒ Identify devices on a network
- 2) ☐ Route data packets
- 3) ☐ Identify devices and Route data
- 4) ☐ Neither Identify devices nor Route data

12) يصنع نواة كابل الاليف الضوئية من

The core of a fiber-optic cable is made of:

- 1) ☐ Copper
- 2) ☐ plastic
- 3) ☒ Both plastic or glass
- 4) ☐ Neither copper nor glass

13) A burst error means that

- 1) ☐ Only 2 bits in the data unit have changed.
- 2) ☒ 2 or more bits in the data unit have changed.
- 3) ☐ only 1 bit in the data unit has changed.
- 4) ☐ All statements are true.

14) Hamming distance measures:

- 1) ☒ The number of differences between corresponding bits in two words
- 2) ☐ The number of errors in a byte
- 3) ☐ The distance between two nodes in a network
- 4) ☐ All statements are true.

15) خطأ التالية العناوين من أي IP addresses are false:

- 1) ☐ 111. 3.20.78
- 2) ☒ 78.256.1.0
- 3) ☐ 20.30.45.3
- 4) ☐ All statements are false

16) تستخدم تقنية اكتشاف وتصحيح الأخطاء لـ

Error detection and correction techniques are used to:

- 1) ☒ Improve the reliability of data transmission
- 2) ☐ Increase the speed of data transmission
- 3) ☐ Reduce the cost of data transmission
- 4) ☐ All statements are false.

17) بت استيفن هي طريقة إضافة :

Bit stuffing is the process of adding:

- 1) ☒ one extra 0 whenever five consecutive 1s follow a 0 in the data.
- 2) ☐ one extra 0 whenever seven consecutive 1s follow a 0 in the data.
- 3) ☐ One extra byte whenever there is a flag or escape character in the text.
- 4) ☐ One extra bit whenever there is a flag or escape character in the text.

18) بعض وظائف طبقة ربط البيانات هي

Some functions of the data link layer are :

- 1) ☐ Routing
- 2) ☐ Framing
- 3) ☐ Error control
- 4) ☒ Framing and Error control



- 19) The application layer uses:
- 1) ☒ Names
 - 2) ☐ Port numbers
 - 3) ☐ Logical addresses
 - 4) ☐ Physical addresses
- 20) تتعامل طبقة الشبكة مع
The network layer deal mange :
- 1) ☐ Names
 - 2) ☐ Port numbers
 - 3) ☒ Logical addresses
 - 4) ☐ Physical addresses
- 21) هذا MAC ادرس
4A : 30 : 10 : 21 : 10 : 1A is a:
- 1) ☒ unicast address
 - 2) ☐ multicast address
 - 3) ☐ broadcast address
 - 4) ☐ anycast address
- 22) In data communications, a frame is: هو الفرم البيانات تراسل في :
- 1) ☐ The physical medium used to transmit data.
 - 2) ☒ A unit of data transmitted over a network.
 - 3) ☐ A protocol used for error detection.
 - 4) ☐ A hardware component of a computer network.
- 23) The Length of the frame is : الفرم طول :
- 1) ☐ 128-bits
 - 2) ☐ 64-bits
 - 3) ☐ 32-bits
 - 4) ☒ 48 bits
- 24) Microwaves are used for:
- 1) ☒ Unicast communication
 - 2) ☐ Multicast communication
 - 3) ☐ Both unicast and multicast communication
 - 4) ☐ Neither unicast nor multicast communication
- 25) The data rate Gigabit Ethernet is:
- 1) ☒ 1000 Mbps
 - 2) ☐ 100 Mbps
 - 3) ☐ 10 Mbps
 - 4) ☐ 10 Gbps
- 26) which of the following is a broadcast address:
- 1) ☒ FF:FF:FF:FF:FF:FF
 - 2) ☐ 47:20:1B:2E:08:EE
 - 3) ☐ EE:EE:EE:EE:EE:EE
 - 4) ☐ All statements are false
- 27) the lenth of IPv6 address is _____ bytes ;
- 1) ☐ 128
 - 2) ☐ 8
 - 3) ☒ 16
 - 4) ☐ 32
- 28) In classful addressing, the address space is divided into
- 1) ☒ Five classes



- 2) - Four classes
3) - Six classes
4) - All statements are false
- 29) Classful addressing is replaced with classless addressing in IPv6.
1) ☒ + 1
2) - 0
- 30) The first address for 192.168.11.17 /28 is:
1) ☒ + 192.168.11.16
2) - 192.168.11.31
3) - 192.168.0.3
4) - All statements are false
- 31) The Broadcast Addresses for 192.168.11.17 /28 is:
1) - 192.168.11.16
2) - 192.168.11.15
3) ☒ + All statements are false
4) - 10.10.1.97
- 32) The number of addresses for the subnet 172.16.5.3 /30 are:
1) - 2
2) ☒ + 4
3) - 16
4) - 32
- 33) In a block, the prefix length is /16; what is the default mask?
1) ☒ + 255.255.0.0
2) - 255.255.255.0
3) - 255.255.255.128
4) - All statements are false
- 34) In IPv6, _____ address defines a single interface
1) ☒ + a unicast
2) - a multicast
3) - an anycast
4) - a broadcast
- 35) An organization is granted a block of classless addresses with the starting address 199.34.32.0/27. How many addresses are granted?
1) - 8
2) - 16
3) ☒ + 32
4) - All statements are false
- 36) _____ is a dynamic mapping protocol return the physical address if the logical address is found
1) ☒ + ARP
2) - ICMPv4
3) - RARP
4) - All statements are true
- 37) An ARP reply is normally _____
1) - broadcast
2) - multicast
3) ☒ + unicast
4) - anycast
- 38) ICMP is one in the _____ layer protocol
1) - data link



- 2) - transport
- 3) ☒ network
- 4) - application

39) The header length of an IPv6 datagram is _____

- 1) - 10 bytes
- 2) - 20 bytes
- 3) - 60 bytes
- 4) ☒ 40 bytes

40) إنشاء وإدارة وإغلاق الحوار يتم في الطبقة الفيزيائية

Establishing, managing, and terminating sessions done by Physical layer

- 1) - True.
- 2) ☒ FALSE.