

الإسم الرقم

أجب عن جميع الأسئلة
ورقة الإمتحان تشتمل على 9 صفحات

Question (1) (25 Marks 11, 14)

(a) Complete the following sentences with suitable words

- 1- A consists of a single sender at one end of the link and a single receiver at the other end of the link.
- 2- When collision occurs a node has to wait. If the waiting interval is large and the number of colliding nodes is small, nodes are likely to wait a amount of time before repeating the sense-and-transmit.
- 3- The sending adapter obtains the MAC of the destination adapter by the aid of the Protocol.
- 4- The maximum transmission unit (MTU) of Ethernet is bytes.
- 5- The is a relative measure of the strength of the received signal (i.e., the information being transmitted) and this noise.
- 6- The is the probability that a transmitted bit is received in error at the receiver.
- 7- Hosts associated with a base station are often referred to as operating in mode.
- 8- A is any physical location where a wireless station receives a sufficiently strong signal from two or more APs.
- 9- IEEE 802.11 stations can group themselves together to form an, a network with no central control and with no connections to the “outside world.”
- 10- First generation (1G) systems were analog systems designed exclusively for voice-only communication.
- 11- Each cellular networks, a cell contains a base transceiver station (BTS) that transmits signals to and receives signals from the in its cell.

(b) What is?

1- Mobility

2- Association

3- Paging

4- Role of Foreign Agent

ESS

5- Flat Structure

6- TTL in ARP table

Question (2) (16 Marks 6, 10)

(a) The abbreviation stands for

1- CSMA : -----

2- SIFS : -----

3- CSMA/CA: -----

4- SSID: -----

5- GPRS: -----

6- IBSS: -----

(B) Match A with B

A			B	A-----> B
1	Base Station Controller	A	COA	1 ----->
2	Type Field	B	4 bytes	2----->
3	TDM	C	FDM	3----->
4	Foreign Agent	D	Handoff mobile users	4----->
5	Ethernet	E	Frame	5----->
6	VLAN	F	CTS and RTS	6----->
7	mobile switching centre (MSC)	G	2 bytes	7----->
8	Link Layer	H	Unreliable	8----->
9	Hidden Terminal	I	Trunking	9----->
10	CRC	J	User Authorization and Accounting	10----->

Question (3) (15 Marks 6, 9)

(a) In the diagram below explain why collision occurs?

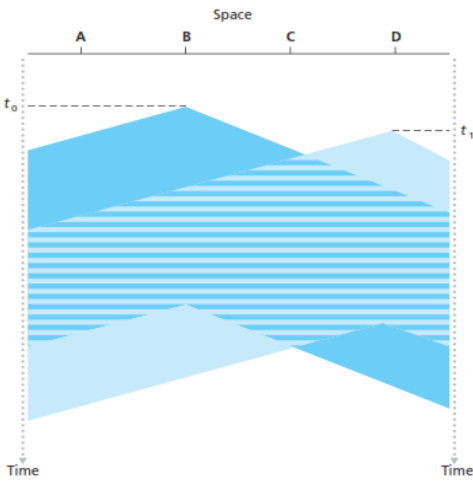


Figure 5.12 ♦ Space-time diagram of two CSMA nodes with colliding transmissions

Question (4) (30 Marks each 3)

Give Short Answers (2 Marks each)

1- What are the possible services that can be offered by a link-layer protocol?

ماهي الخدمات التي يمكن ان يقدمها بروتوكول طبقة الربط؟

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2- What the advantages of slotted ALOHA?

ماهي مزايا بروتوكول الوصول المتعدد Slotted ALOHA؟

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3- What are the drawbacks of hierarchical Configuration of LANs?

ماهي مساوئ التهيئة الهرميه للشبكات المحلية؟

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4- What are the Differences between Wired and Wireless Networks?

ماهي الفروق بين الشبكات السلكية واللاسلكية؟

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5- List the four classes of wireless networks?

أذكر التصنيفات الأربعة للشبكات اللاسلكية؟

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6- What specifically happens when H1 moves from BSS1 to BSS2 in the same subnet?

ما الذي يحدث عندما يتحرك الجهاز H1 من BSS1 الي BSS2 الموجودان علي نفس الشبكة؟

7- How address1, address2 and address3 in the 802.11 Frame are used?

كيف يتم استخدام العناوين 1 , 2 , و 3 الموجوده في فريم بروتوكول الواي فاي؟

8- How does your wireless station know which APs, if any, are out there in the jungle?

كيف يعرف الجهاز اللاسلكي ما إذا كانت هنالك نقاط وصول APs في مجاله؟

9- What are the two major differences between Ethernet and 802.11?

ماهما الفرقان الرئيسيان بين بروتوكلي الايثرنت و الواي فاي؟

10- Why the 802.11 MAC protocol does *not* implement collision detection?

لماذا لم يستخدم بروتوكول الواي فاي الية لاكتشاف التصادم؟

Question (5) (19 Marks, 5, 6, 8)

1- How the hidden Terminal Problem is solved in 802.11?

مستعينا بالرسم وضح كيف تم حل مشكلة المحطة المخفية بواسطة بروتوكول الواي فاي؟

2- Explain the difference between Passive and Active Scanning?

مستعينا بالرسم وضح الفرق بين المسح الخامل و المسح النشط؟
