

Started on Friday, 26 April 2024, 2:30 PM

State Finished

Completed on Friday, 26 April 2024, 2:42 PM

Time taken 11 mins 46 secs

Grade 21.00 out of 25.00 (84%)

Question **1**

Complete

Mark 0.00 out of 1.00

In UMTS architecture, the interface between the Node B and RNC (Radio Network Controller) is

- ☐ a. lub interface
- ☐ b. lur interface
- ☒ c. lu interface
- ☐ d. None of these

Question **2**

Complete

Mark 1.00 out of 1.00

SS7 (Signalling System No. 7) protocol supports the interface between

- ☐ a. None of these
- ☐ b. MS and BTS
- ☐ c. BTS and BSC
- ☒ d. BSC and MSC

Question **3**

Complete

Mark 1.00 out of 1.00

A base station (BS) is transmitting with a power of 25 watt at frequency $f_c = 900 \text{ MHz}$, the distance between the BS and the receiver mobile unit is 50 m. Calculate the power received in dBm by the mobile unit considering free space propagation, where both the transmitting and receiving antenna has unit gain.

- ☐ a. 69.49 dBm
- ☐ b. None of these
- ☐ c. 21.53 dBm
- ☒ d. -21.53 dBm

Question **4**

Complete

Mark 0.00 out of 1.00

A base station (BS) is transmitting with a power of 50 watt at frequency $f_c = 915 \text{ MHz}$, the distance between the BS and the receiver mobile unit is 100 m. Calculate the power received in dBm by the mobile unit considering free space propagation, where both the transmitting antenna has unit gain and receiving antenna has a gain 2dB.

- ☐ a. None of these
- ☐ b. -16.525 dBm
- ☒ c. -22.530 dBm
- ☐ d. -21.668 dBm

Question **5**

Complete

Mark 1.00 out of 1.00

The major constraint in a mobile sensor network (MSN) _____

- ☐ a. Power Management
- ☒ b. Mobility Management
- ☐ c. Heterogeneity
- ☐ d. Bandwidth Management

Question **6**

Complete

Mark 1.00 out of 1.00

In the Friis transmission equation, the power received is not a function of

- ☐ a. Distance between the transmitter and receiver
- ☐ b. Antenna Gain
- ☐ c. Transmitter power
- ☒ d. None of these

Question **7**

Complete

Mark 0.00 out of 1.00

Which GSM security measure prevents unauthorized devices from accessing the GSM network?

- ☐ a. IMEI blocking
- ☒ b. Authentication
- ☐ c. Ciphering
- ☐ d. TMSI reallocation

Question **8**

Complete

Mark 1.00 out of 1.00

Which GSM security feature provides mutual authentication between the mobile device and the network?

- ☐ a. International Mobile Subscriber Identity (IMSI) catching
- ☒ b. Authentication Key (Ki)
- ☐ c. IMEI blocking
- ☐ d. Cipherring

Question **9**

Complete

Mark 1.00 out of 1.00

In a single sensor module, which one among the following is an optional unit

- ☐ a. Sensing unit
- ☐ b. Memory unit
- ☒ c. Location finder or GPS
- ☐ d. Power supply unit
- ☐ e. Processing unit

Question **10**

Complete

Mark 1.00 out of 1.00

The interface between the UTRAN (UMTS Terrestrial Radio Access Network) and the CN (Core Network) is

- ☒ a. lu interface
- ☐ b. lur interface
- ☐ c. lub interface
- ☐ d. None of these

Question **11**

Complete

Mark 1.00 out of 1.00

A network of five mobile phones for data sharing is created using Bluetooth, what is the operating frequency of this network

- ☐ a. 5 GHz
- ☒ b. 2.48 GHz
- ☐ c. 24 GHz
- ☐ d. 240 MHz

Question **12**

Complete

Mark 1.00 out of 1.00

SYN flooding is an _____ layer attack.

- ☐ a. Data Link
- ☐ b. Application
- ☐ c. Network
- ☒ d. Transport

Question **13**

Complete

Mark 1.00 out of 1.00

A digital signature is required for:

- ☒ a. non repudiation of communication by a sender
- ☐ b. None of these
- ☐ c. all e-mail sending
- ☐ d. session hijacking

Question **14**

Complete

Mark 1.00 out of 1.00

Which of the statement is wrong among the following

- ☒ a. HSPA+ (Evolved High Speed Packet Access) is known as 4G.
- ☐ b. HSPA allows networks based UMTS (Universal Mobile Telecommunication Systems) to acquire higher data speed.
- ☐ c. None of these
- ☐ d. HSPA (High Speed Packet Access) is known as 3.5G.

Question **15**

Complete

Mark 1.00 out of 1.00

The attacker instead of compromising a single computer & its internet bandwidth, a _____ utilizes various systems & their connections for flooding the targeted website.

- ☐ a. Point-of-sale malware (POS) attack
- ☐ b. Denial of Service (DoS) attack
- ☐ c. None of these
- ☒ d. Distributed Denial of Service (DDoS) attack

Question **16**

Complete

Mark 1.00 out of 1.00

Which among them has the strongest wireless security?

- ☒ a. WPA3 (Wi-Fi Protected Access 3)
- ☐ b. WPA2 (Wi-Fi Protected Access 2)
- ☐ c. WPA (Wi-Fi Protected Access)
- ☐ d. WEP (Wireless Equivalent Privacy)

Question **17**

Complete

Mark 1.00 out of 1.00

The network security requirement needed for industrial purposes is of

- ☐ a. Level 0
- ☐ b. Level 1
- ☐ c. Level 3
- ☒ d. Level 2

Question **18**

Complete

Mark 1.00 out of 1.00

In Low Energy Adaptive Clustering Hierarchy protocol, the communication between the nodes and the cluster head node is done using

- ☒ a. TDMA
- ☐ b. CDMA
- ☐ c. SDMA
- ☐ d. FDMA

Question **19**

Complete

Mark 1.00 out of 1.00

Which of the following is a Transport layer attack?

- ☒ a. SYN flooding attack
- ☐ b. Blackhole attack
- ☐ c. Byzantine attack
- ☐ d. Malicious code attack

Question **20**

Complete

Mark 0.00 out of 1.00

Packet Spoofing is a type of

- ☒ a. Active attack
- ☐ b. None of these
- ☐ c. Passive attack

Question **21**

Complete

Mark 1.00 out of 1.00

Which version of WPA introduced the Temporal Key Integrity Protocol (TKIP)?

- ☐ a. WPA3
- ☐ b. WPA2
- ☒ c. WPA
- ☐ d. WPA-Personal

Question **22**

Complete

Mark 1.00 out of 1.00

Sound Navigation and Ranging (SONAR) technology uses _____ for communication.

- ☐ a. LASER
- ☐ b. Infrared waves
- ☒ c. Ultrasonic waves
- ☐ d. Microwaves

Question **23**

Complete

Mark 1.00 out of 1.00

Which among the following is the least strong security encryption standard for wireless networks?

- ☐ a. Wi-Fi Protected Access 2 (WPA2)
- ☐ b. Wi-Fi Protected Access (WPA)
- ☒ c. Wired Equivalent Privacy (WEP)
- ☐ d. Wi-Fi Protected Access 3 (WPA3)

Question **24**

Complete

Mark 1.00 out of 1.00

Which encryption algorithm is primarily used by WPA for securing wireless networks?

- ☐ a. DES
- ☐ b. RC4
- ☒ c. AES
- ☐ d. MD5

Question **25**

Complete

Mark 1.00 out of 1.00

To avoid cell dragging which parameters has to carefully handled

- ☐ a. Handoff threshold
- ☒ b. Both transmitting power of BS and distance between the BS and the mobile unit
- ☐ c. Distance between the BS and the mobile unit
- ☐ d. Transmitting power of Base Station (BS)