Est. Length: 2:00:00 Time Taken:0:13:37 KHIU KIM HONG EEE-DEEE-FT-3A-06: Attempt 3

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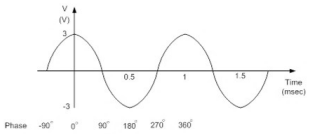
Question 1 (4 points) ✓ *Saved*

What are the values of amplitude, frequency and phase of the voltage signal [$v(t) = V_p Sine(2\pi ft + \theta)$] given in the following Figure?



- $V_p = 3$ V, f = 1000 Hz and $\theta = 0°$
- $V_p = 6$ V, f = 500 Hz and $\theta = 90°$
- **(selected)** $V_p = 3$ V, f = 1000 Hz and $\theta = 90°$
- $V_p = 3$ V, f = 500 Hz and $\theta = 0°$

Question 2 (4 points) ✓ *Saved*

Which of the following Wireless LAN standards has the bit rate of 5.5 Mbps?

- IEEE 802.11n
- IEEE 802.11a
- **(selected)** IEEE 802.11b
- IEEE 802.11g

Question 3 (4 points) ✓ *Saved*

An application of ZigBee technology is to

- **(selected)** monitor and control devices remotely
- display Web Page on a cellular phone
- connect devices within short distance at very high speeds
- transmit data at distances of up to 30 kilometres

Question 4 (4 points) ✓ *Saved*

Which of the following statements is FALSE about security in wireless technologies?

- Every user can potentially be a hacker to other users on wireless network.
- Once user is authenticated, its activities in the wireless network can be monitored by the administrator.
- Every data transmission can potentially be an interferer to other data transmission on wireless network.
- **(selected)** Once data is encrypted, it is not possible to be decrypted by unauthrorized users.

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Question 5 (4 points) ✓ *Saved*

Which of the following wireless technologies is most suitable for secure payment?

- **(selected)** NFC
- ZigBee
- Bluetooth
- UWB

Question 6 (4 points) ✓ *Saved*

Which of the following frequency ranges are license free?

- [x] 5.8 GHz
- [ ] 900 MHz
- [ ] 2.1 GHz
- [ ] 1.8 GHz
- [x] 2.4 GHz
- [x] 5.2 GHz

Question 7 (4 points) ✓ *Saved*

Which of the following RF spectrum requires line-of-sight operation?

- ULF
- **(selected)** EHF
- VLF
- HF

Question 8 (4 points) ✓ *Saved*

Which of the following wireless technologies is most suitable to transmit stereo music between handset and an MP3 player?

- RFID
- **(selected)** Bluetooth
- UWB
- ZigBee

Question 9 (4 points) ✓ *Saved*

Which type of multiple access techniques is implemented in the system shown in Figure?

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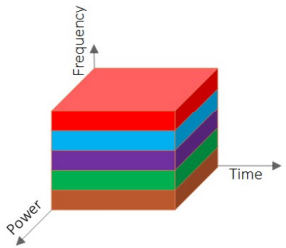
Question 9 (4 points) Saved

Which type of multiple access techniques is implemented in the system shown in Figure?



- (•) FDMA
- ( ) CDMA
- ( ) CSMA
- ( ) TDMA

Question 10 (4 points) Saved

Which of the following wireless technologies has the lowest bitrate?

- ( ) Bluetooth
- (•) ZigBee
- ( ) UWB
- ( ) WLAN

Question 11 (4 points) Saved

The frequency range for UHF band is:

- ( ) between 300 kHz to 3000 kHz.
- (•) between 300 MHz to 3 GHz.
- ( ) between 30 MHz to 300 MHz.
- ( ) between 3 GHz to 30 GHz.

Question 12 (4 points) Saved

An application of WLAN technology is to

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Question 12 (4 points) Saved

An application of WLAN technology is to

- ( ) monitor and control devices remotely
- ( ) connect devices within short distance at very high speeds
- ( ) track and record items in a warehouse for inventory control
- (•) browse Web Pages on a WiFi enabled smartphone

Question 13 (4 points) Saved

An application of RFID technology is to

- ( ) monitor and control devices remotely
- (•) track and record items in a warehouse for inventory control
- ( ) browse Web Page on a cellular phone
- ( ) connect devices within short distance at very high speeds

Question 14 (4 points) Saved

Which of the following wireless technologies is most suitable for providing broadband Internet access to home users?

- ( ) ZigBee
- ( ) UWB
- ( ) Bluetooth
- (•) WiMAX

Question 15 (4 points) Saved

Which of the following wireless technologies is most suitable to transmit video data from DVD player to TV?

- ( ) ZigBee
- (•) UWB
- ( ) RFID
- ( ) Bluetooth

Question 16 (4 points) Saved

If the lower and upper cutoff frequencies of a telephone line are 300 Hz and 3,400Hz, respectively, what is the bandwidth of this telephone line?

- ( ) 400 Hz
- ( ) 300 Hz
- (•) 3100 Hz
- ( ) 3400 Hz

Question 17 (4 points) Saved

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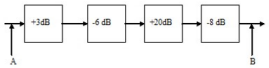
Question 17 (4 points) ✓ *Saved*

Figure shows the block diagram of a communication system. Which of the following is a correct one?



- (•) Input power A = 10 dBm and Output power B = 19 dBm
- ( ) Input power A = 10 dBm and Output power B = 9 dBm
- ( ) Input power A = 10 dBm and Output power B = 19 dB
- ( ) Input power A = 0 dBm and Output power B = 19 dBm

Question 18 (4 points) ✓ *Saved*

Which of the following statements is FALSE regarding the advantages of wireless technologies?

- ( ) It provides lower installation cost for users.
- ( ) It provides access to remote areas for users.
- ( ) It provides mobility or users.
- (•) It provides greater privacy for users.

Question 19 (4 points) ✓ *Saved*

Which components is/are required for communication system to communicate wirelessly?

- [ ] Optical Cables
- [ ] Wires
- [x] RF Transmitter
- [x] RF Receiver

Question 20 (4 points) ✓ *Saved*

Which of the following wireless technologies is most suitable to monitor the temperature, humidity and air quality of various locations in a campus with multiple sensors?

- (•) ZigBee
- ( ) UWB
- ( ) Wireless LAN
- ( ) Bluetooth

Question 21 (4 points) ✓ *Saved*

Which of the following wireless technologies is most suitable to be used in a library to track the checking out and checking in books and items?

- ( ) WLAN

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Question 21 (4 points) ✓ *Saved*

Which of the following wireless technologies is most suitable to be used in a library to track the checking out and checking in books and items?

- ( ) WLAN
- ( ) Bluetooth
- (•) RFID
- ( ) UWB

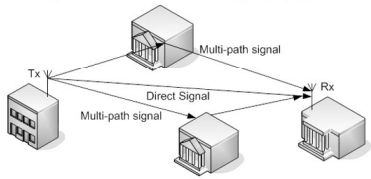
Question 22 (4 points) ✓ *Saved*

A device that can convert sound energy to electrical energy is

- ( ) Transmitter
- ( ) Receiver
- ( ) Amplifier
- (•) Microphone

Question 23 (4 points) ✓ *Saved*

Figure shows the multi-path phenomenon in wireless communication. Which of the following is one of the effects on the signal propagation from one point to another?



- ( ) Signal can travel at greater distance
- ( ) Increase in signal to noise ratio
- ( ) Increase in system gain
- (•) Signal attenuation

Question 24 (4 points) ✓ *Saved*

Which of the following is correct for 1W of power in term of decible unit?

- ( ) -30 dBm
- ( ) 1 dB
- (•) (0 dBm + 30 dB) dBm
- ( ) 1 dBW

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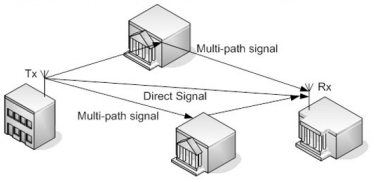
following is one of the effects on the signal propagation from one point to another?



- Signal can travel at greater distance
- Increase in signal to noise ratio
- Increase in system gain
- (selected) Signal attenuation

Question 24 (4 points) ✓ *Saved*

Which of the following is correct for 1W of power in term of decible unit?

- -30 dBm
- 1 dB
- (selected) (0 dBm + 30 dB) dBm
- 1 dBW

Question 25 (4 points) ✓ *Saved*

A wireless communication system was shown in Figure. Which of the following options is the power at the output of the receiver?

$$P_{rx} = P_{in} + G_{PA} + G_{TXant} - FSL + G_{Rxant} + G_{LNA}$$

- -20 dBm
- -11 dB
- (selected) -11 dBm
- 129 dBm

Submit Quiz *25 of 25 questions saved*