Grade Book Detail

,

Exercise 2 (Chap 2)

Started: September 29, 2019, 12:06 am
Last change: September 29, 2019, 10:36 pm

Showing Scored Attempts | Show Last Attempts | Show Review Attempts

Hide Perfect Score Questions | Hide Not Answered Questions

Q. Television channels are 18 MHz wide. How many bits/sec can be sent if 256-level digital signals are used? Assume a noiseless channel.
A. 288 Mbps
Show Answer 288

Question 1: 10 out of 10 in 1 attempt(s)

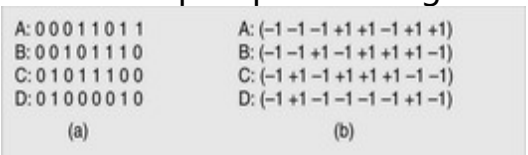
Q. If a binary signal is sent over a 15-kHz channel whose signal-to-noise ratio is 15 dB, what is the maximum achievable data rate?
A. 60 kbps
Show Answer 30

Question 2: 0 out of 10 in 1 attempt(s)

Q. 14 signals, each requiring 5000 Hz, are multiplexed on to a single channel using FDM. How much minimum bandwidth is required for the multiplexed channel? Assume that the guard bands are 200 Hz wide.
A: 72600 Hz
Show Answer 72600

Question 3: 10 out of 10 in 1 attempt(s)

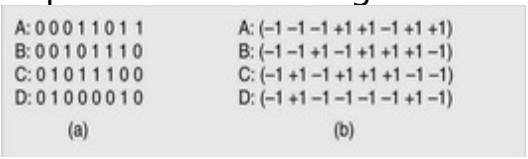
Q. Suppose that A, B, and C are simultaneously transmitting 0 bits, using a CDMA system with the chip sequence of figure following:



What is the resulting chip sequence? give your answer as (+x,-x,-x, ...)
(-4,0,0,0,1,0,1,-1)
Show Answer (+3,+1,+1,-1,-3,-1,-1,+1)

Question 4: 0 out of 10 in 1 attempt(s)

Q. A CDMA receiver gets the following chips: (-1 +1 -3 +1 -1 -3 +1 +1). Assuming the chip sequences defined in figure following,



which stations transmitted, and which bits did each one send?

A. Choise the best answer

- Station A send ◉ sent bit 1 ○ sent bit 0 ○ silence
- Station B send ○ sent bit 1 ◉ sent bit 0 ○ silence
- Station C send ○ sent bit 1 ○ sent bit 0 ◉ silence
- Station D send ◉ sent bit 1 ○ sent bit 0 ○ silence

Show Answer sent bit 1
Show Answer sent bit 0
Show Answer silence
Show Answer sent bit 1

Question 5: 8 (parts: 2, 2, 2, 2) out of 8 in 1 attempt(s)

Q. A signal is transmitted digitally over a 4-kHz noiseless channel with one sample every 125 µsec. How many bits per second are actually sent for each of these encoding methods?

A. 1) CCITT 2.048 Mbps standard: 64 kbps

A. 2) DPCM with a 4-bit relative signal value:
32 kbps

A. 3) Delta modulationard: 8 kbps

Show Answer 64
Show Answer 32
Show Answer 8

Question 6: 6 (parts: 2, 2, 2) out of 6 in 1 attempt(s)

Q. What is the percent overhead on a T1 carrier; that is, what percent of the 1.544 Mbps are not delivered to the end user? How about the E1 carrier ?

A. For the T1 carrier: 13 % (give your answer as an integer)

A. For the E1 carrier: 6 % (give your answer as an integer)

Show Answer 13
Show Answer 6

Question 7: 6 (parts: 3, 3) out of 6 in 1 attempt(s)

Q. A simple telephone system consists of two end offices and a single toll office to which each end office is connected by a 1-MHz full-duplex trunk. The average telephone is used to make four calls per 8-hour workday. The mean call duration is 6 min. Ten percent of the calls are long-distance (i.e., pass through the toll office). What is the maximum number of

telephones an end office can support? (Assume 4 kHz per circuit.)

A. 50000

Show Answer 50000

Question 8: 10 out of 10 in 1 attempt(s)

What is the transmission unit for the physical layer?

- (•) bit
- ( ) frame
- ( ) packet
- ( ) segment

Show Answer bit

Question 9: 5 out of 5 in 1 attempt(s)

A noiseless 2-k Hz channel is sampled every 1 msec. What is the maximum data rate?

- ( ) 1000 bps
- ( ) 2000 bps
- ( ) 4000 bps
- (•) Can be infinite

Show Answer Can be infinite

Question 10: 5 out of 5 in 1 attempt(s)

The cable between toll office and the end office of telephone company are known as the

- ( ) local loop
- (•) trunk
- ( ) microwave line
- ( ) coaxial cable

Show Answer trunk

Question 11: 5 out of 5 in 1 attempt(s)

An T1 channel contains 24 PCM signals, its data rate is

- ( ) 2.048 Mbps
- (•) 1.544 Mbps

- 64 kbps
- 100 Mbps

Show Answer 1.544 Mbps

Question 12: 5 out of 5 in 1 attempt(s)

An E1 channel contains 32 PCM signals, its data rate is

- 2.048 Mbps
- 1.544 Mbps
- 64 kbps
- 10 Mbps

Show Answer 2.048 Mbps

Question 13: 5 out of 5 in 1 attempt(s)

An E1 channel contains 32 PCM time slots, the data rate of each time slot channel is

- 2.048 Mbps
- 1.544 Mbps
- 64 kbps
- 10 Mbps

Show Answer 64 kbps

Question 14: 0 out of 5 in 1 attempt(s)

Total: 75/100

Return to GradeBook