Assignment 0

The due date for submitting this assignment has passed. Due on 2019-02-04, 23:59 IST.
As per our records you have not submitted this assignment.

1) The normalized power of the signal \( x(t) = A \cos 2\pi f_0 t \) for \(-\infty < t < \infty\) is - 1 point

   a. \( \frac{A^2}{2} \)
   b. \( \frac{A^2}{4} \)
   c. \( \frac{A^2}{8} \)
   d. None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:

a

2) The period of \( \cos(200\pi t) + \sin(400\pi t) \) is 1 point

   a. 100
   b. 250
   c. 350
   d. 200

No, the answer is incorrect.
Score: 0
Accepted Answers:

a
3) The intermediate frequency of a super heterodyne receiver is 500 kHz. What is the image frequency at 1200 kHz?

a. 600 kHz  
b. 500 kHz  
c. 2200 kHz  
d. 800 kHz

No, the answer is incorrect.
Score: 0
Accepted Answers: 

c.

4) The power spectral density of an AWGN is

a. A strictly increasing function of frequency  
b. A constant function of frequency  
c. A strictly decreasing function of frequency  
d. none of the above

No, the answer is incorrect.
Score: 0
Accepted Answers: 
a.
A frequency modulated signal can be demodulated by:

a. Multiplying with carrier frequency followed by low pass filtering  
b. Passing through a voltage controlled oscillator (VCO)  
c. Passing through a differentiator followed by envelope detection  
d. Passing through an integrator followed by envelope detection

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
c.

7) Phase Locked Loop (PLL) circuit can be used for which of the following reasons? 1 point

a. Carrier frequency tracking only  
b. Carrier Phase tracking only  
c. Both frequency and phase tracking  
d. None

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
c.

8) The modulation scheme that requires least bandwidth and power is___________

a. Single Sideband Modulation  
b. Double Sideband Modulation  
c. Vestigial Sideband Modulation  
d. Frequency Modulation

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
a.
Which of the following is an advantage of using envelope detection as a demodulation scheme?

a. It requires less transmission power  
b. It requires less transmission bandwidth  
c. It eliminates the necessity of carrier recovery  
d. It helps in the carrier recovery

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
c.

10. The square-law modulator is used to generate the ______ signals?

a. Amplitude Modulated  
b. Frequency Modulated  
c. All of the above  
d. None of the above

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
a.

11. One of the main disadvantages of FM over AM is

a. requires high output power  
b. high modulating power is needed  
c. large bandwidth required  
d. high noise is produced

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
c.
13) Which of the following modulation system is used for video-modulation?
   a. Single Sideband Modulation
   b. Double Sideband Modulation
   c. Vestigial Sideband Modulation
   d. Frequency Modulation

   No, the answer is incorrect.
   Score: 0
   Accepted Answers: c.

14) In the Phase Modulation technique, the _____ of the carrier signal is varied according to the modulating signal.

   a. Frequency
   b. Amplitude
   c. Phase
   d. None of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers: c.

14) The autocorrelation function of an AWGN is described by:

   a. A triangle function
   b. A delta function
   c. A square function
   d. None of the above

   No, the answer is incorrect.
   Score: 0
   Accepted Answers:
15 Which of the following is a digital modulation technique?  

- a. Pulse Amplitude Modulation  
- b. Pulse Width Modulation  
- c. Amplitude Shift keying  
- d. None of the above  

No, the answer is incorrect.  
Score: 0  
Accepted Answers:  
- c.