قائمة الاسئلة

اتصالات الكترونية- كلية الهندسة - قسم الكهرباء- المستوى ..الرابع... - ...التخصص.اتصالات.- ساعتان - درجة هذا الاختبار (50)

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1) in Balanced modulator, the message signal is zero, the output is not zero
1. true
2. false

1) - 1
2) + 2

2) the Pulse-Averaging Discriminators is used in FM modulator
1. true
2. false

1) - 1
2) + 2

3) The slope detector is use linear region to detect FM signal
1. true
2. false

1) + 1
2) - 2

4) in A varactor phase modulator the resistance is changed according to message signal
1. true
2. false

1) - 1
2) + 2

5) in a varactar midulator the diode is connected reverse
1. true
2. false

1) + 1
2) - 2

6)

In amplitude modulation, the …… of carrier is varied according to the strength of the signal.

1. **Amplitude**
2. **Frequency**
3. **Phase**
4. **None of the above**

1) \+ 1
2) - 2
3) - 3
4) - 4

7) **undermodulation (amplitude) occurs when signal amplitude is …… carrier amplitude**

1. **Equal to**
2. **Greater than**
3. **Less than**
4. **None of the above**

1) - 1
2) - 2
3) \+ 3
4) - 4

8) **In an AM wave, the majority of the power is in ……..**

1. **Lower sideband**
2. **Upper sideband**
3. **Carrier**
4. **None of the above**

1) - 1
2) - 2
3) \+ 3
4) - 4

9) **At 100% modulation, the power in each sideband is …… of that of carrier**

1. **50%**
2. **40%**
3. **60%**
4. **25%**

1) - 1
2) - 2
3) - 3
4) \+ 4

10)

Overmodulation results in ……..

1. **Weakening of the signal**
2. **Excessive carrier power**
3. **Distortion**
4. **None of the above**

1) - 1
2) - 2
3) + 3
4) - 4

11) **If modulation is 50% then signal amplitude is …….. carrier amplitude**

1. **Equal to**
2. **Greater than**
3. **Less than**
4. **None of the above**

1) - 1
2) - 2
3) + 3
4) - 4

12) **As the modulation level is increased, the carrier power ……..**

1. **Is increased**
2. **Remains the same**
3. **Is decreased**
4. **None of the above**

1) - 1
2) + 2
3) - 3
4) - 4

13) **Demodulation is done in ……**

1. **Receiving antenna**
2. **Transmitter**
3. **Radio receiver**
4. **Transmitting antenna**

1) - 1
2) - 2

3) + 3
4) - 4

14) **A 50 kW carrier is to be amplitude modulated to a level of 85%. What is the carrier power after modulation?**

1. **50 kW**
2. **5 kW**
3. **8 kW**
4. **25 kW**

1) + 1
2) - 2
3) - 3
4) - 4

15) **In radio transmission, the medium of transmission is ……..**

1. **Space**
2. **An antenna**
3. **Cable**
4. **None of the above**

1) + 1
2) - 2
3) - 3
4) - 4

16) **If level of modulation is increased ……. power is increased**

1. **Carrier**
2. **Sideband**
3. **Carrier as well as sideband**
4. **None of the above**

1) - 1
2) + 2
3) - 3
4) - 4

17) **When the modulating signal controls the frequency of the carrier, we get…….**

1. **Phase modulation**
2. **Amplitude modulation**
3. **Frequency modulation**
4. **May be any one of the above**

1) - 1
2) - 2
3) + 3
4) - 4

18)

If Amin = 40 and Amax = 60, what is the percentage of modulation?

1. **20 %**
2. **40 %**
3. **50 %**
4. **10 %**

1) \+ 1
2) \- 2
3) \- 3
4) \- 4

19) **An AM transmitter uses high-level modulation of the final RF power amplifier, which has a dc supply voltage VCC of 48 V with a total current I of 3.5 A. The efficiency is 70% .**

What is the RF input power to the final stage?

1: 84W

2: 168W

3: 117.6W

4: 18.85W

1) \- 1
2) \+ 2
3) \- 3
4) \- 4

20) **An AM transmitter uses high-level modulation of the final RF power amplifier, which has a dc supply voltage VCC of 48 V with a total current I of 3.5 A. The efficiency is 70% .**

How much AF power is required for 100 percent modulation? (Hint: For 100 percent modulation, AF modulating power Pm is one-half the input power.

1: 84W

2: 168W

3: 117.6W

4: 18.85W

1) \+ 1
2) \- 2
3) \- 3
4) \- 4

21)

An AM transmitter uses high-level modulation of the final RF power amplifier, which has a dc supply voltage VCC of 48 V with a total current I of 3.5 A. The efficiency is 70% .

What is the carrier output power?

1: 84W

2: 168W

3: 117.6W

4: 18.85W

1) - 1
2) - 2
3) + 3
4) - 4

22)

An AM transmitter uses high-level modulation of the final RF power amplifier, which has a dc supply voltage VCC of 48 V with a total current I of 3.5 A. The efficiency is 70% .

What is the power in one sideband for 67 percent modulation?

1: 84W

2: 168W

3: 117.6W

4: 18.85W

1) - 1
2) - 2
3) - 3
4) + 4

23)

An AM transmitter uses high-level modulation of the final RF power amplifier, which has a dc supply voltage VCC of 48 V with a total current I of 3.5 A. The efficiency is 70% .

What is the maximum and minimum dc supply voltage swing with 100 percent MODULATION?

1: 98V

2: 97V

3: 96V

4: 99V

1) - 1
2) - 2
3) + 3
4) - 4

24) **A transmitter must operate at a frequency of 168.96 MHz with a deviation of 65 kHz.**
It uses three frequency multipliers—a doubler, a tripler, and a quadrupler. Phase modulation is used.

Calculate:
the frequency of the carrier crystal oscillator?

1: 7.5MHz

2: 7.04KHz

3: 7.4H

4: 7.04MHz

1) - 1
2) - 2
3) - 3
4) + 4

25) **A transmitter must operate at a frequency of 168.96 MHz with a deviation of 65 kHz.**
It uses three frequency multipliers—a doubler, a tripler, and a quadrupler. Phase modulation is used.

the phase shift required to produce the necessary deviation at a 2.8-kHz modulation frequency.
What is the total phase shift?

1: 8.256 °

2: 8.591 °

3: 8.526°

4: 8.625 °

1) - 1
2) - 2
3) + 3
4) - 4