

Question: 1

Which characteristic is an advantage of copper based media over optical fiber cable?

- A. Weight
- B. Corrosion resistance
- C. Ability to handle analog signals
- D. Susceptibility to EMI
- E. Very high data rates

Answer:C

Question: 2

Which is an advantage of stranded conductors over solid conductors?

- A. Less costly
- B. Simpler terminations
- C. Better high frequency performance
- D. More flexible

Answer:D

Question: 3

Composite conductors, although not generally recommended, may be used in special circumstances because they provide all of the following advantages EXCEPT:

- A. Have good digital transmission characteristics
- B. Lightweight
- C. Inexpensive
- D. Easy to produce
- E. Easily embedded into other materials

Answer:A

Question: 4

Which electrical characteristic is displayed with the correct preferred value?

- A. Dielectric constant – high value
- B. Dielectric strength – high value
- C. Dissipation factor – low value
- D. Insulation resistance - high value

Answer:A

Question: 5

If the input signal power to a communication system is 1 W and the output power is 1 mW, the system attenuation is:

- A. 3 dB
- B. 20 dB
- C. 30 dB
- D. 40 dB
- E. 1000 dB

Answer:C

Question: 6

Two sinusoidal signals have the same amplitude (A) and the same frequency (f). They differ in phase by 180 degrees. If these two signals are added together, the result is a sinusoidal signal having an amplitude of:

- A. Zero
- B. $0.707A$ and a frequency of f
- C. A and a frequency of $2f$
- D. $2A$ and a frequency of f
- E. $2A$ and a frequency of $2f$

Answer:A

Question: 7

Which of the following correctly lists the lowest frequency band to the highest frequency band?

- A. MF, HF, VHF, UHF
- B. UHF, VHF, HF, MF
- C. HF, MF, UHF, VHF
- D. VHF, UHF, MF, HF
- E. HF, MF, UHF, VHF

Answer:A

Question: 8

The conversion of an analog speech signal to a pulse code modulation (PCM) digital signal involves all of the following steps EXCEPT:

- A. Low pass filtering
- B. Periodic sampling
- C. Quantizing
- D. Companding
- E. Amplitude modulation

Answer:E

Question: 9

The signal at the input to a balanced twisted pair cable is 10 mW. The cable is 1000 feet long and has an attenuation of 1 dB per 100 feet. This cable is connected to the input of a receiver. The noise level at the input to the receiver is 1 microwatt. What is the signal-to-noise ratio (SNR) (dB) at the receiver input?

- A. 10 dB
- B. 30 dB
- C. 40 dB
- D. 60 dB
- E. 100 dB

Answer:B

Question: 10

You must place CAT6 cable above a factory floor with automated welding machines and hammer forges. Of the following, what type of shielding would be most effective?

- A. Multi-layer braid
- B. Foil and braid
- C. Solid metallic conduit
- D. Flex metallic conduit
- E. Sch. 40 PVC conduit

Answer:C
