A sampling of the CMET questions: (Answers will be multiple choice)

- What is the effective radiated power of a repeater with 50-watts transmitter power output, 4-dB feed line loss, 3-dB duplexer and circulator loss, and 6-dB antenna gain?

- 746 watts, roughly 3/4 kilowatt corresponding to the lifting of 550 pounds at the rate of 1 foot per second is _____.

- Silicone crystals are used in radar mixer and detector section. Using only an ohmmeter, how might a crystal be checked to determine if it is functional?

- Multiple satellite TV receivers are located on a 150-foot vessel. The antenna and distribution of signals are located at the stern. The receivers located at the front of the boat have poor signal quality while the receivers located at the back of the boat, have good quality. The MOST likely cause is ____.

- The router has DHCP services turned on. Clients are being correctly assigned IP addresses. Gateway address is properly configured. The most likely reason for not being able to access outside the gateway is ______.

- NMEA 2000 uses instances to distinguish between similar devices. For example, two engines on the same vessel would be required to transmit using two different instances so the displays could distinguish the port engine (instance 0) from the starboard engine (instance 1). In a dual engine configuration, what happens if both engines transmit data using the same port instance?

- How is the efficiency of a power amplifier determined?

- What are the characteristics of the ideal op-amp?

- What is the name of the condition that occurs when the signals of two transmitters in close proximity mix together in one or both of their final amplifiers, and unwanted signals at the sum and difference frequencies of the original transmissions are generated?

- For a space wave transmission, the radio horizon distance of a transmitting antenna with a height of 100 meters is approximately