



DEVRYBOOTCAMP

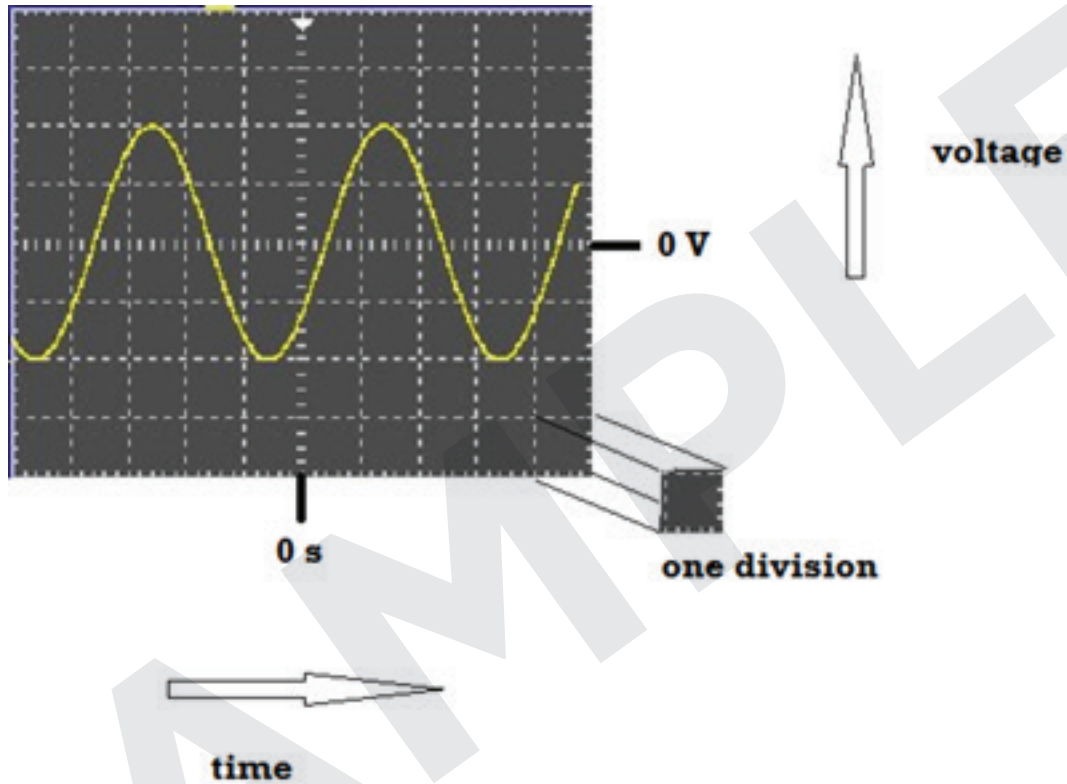


**INTERNET OF THINGS
NETWORKING & FIELD
SERVICE PROGRAM**

SAMPLE ACADEMIC ASSESSMENT

ELECTRONICS

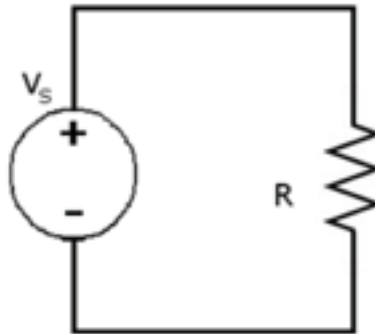
1. The figure below shows a waveform of a periodic signal measured by an oscilloscope. The oscilloscope settings are: time scale = 5 ms / div and voltage scale = 5 V / div. What is the time period, frequency and the peak to peak voltage for the signal shown? The minimum value of the signal is 0V.



Select one correct answer:

- a. Voltage (peak to peak) = 10V ; Period = 50ms; Frequency = 20 Hz
- b. Voltage (peak to peak) = -10 V ; Period = 20ms; Frequency = 50 Hz
- c. Voltage (peak to peak) = -10V ; Period = 50ms; Frequency = 20 Hz
- d. Voltage (peak to peak) = 10 V ; Period = 20ms; Frequency = 50 Hz
- e. Voltage (peak to peak) = 20 V ; Period = 20ms; Frequency = 50 Hz

2. Given: $V_s = 10 \text{ V}$, $R = 50 \Omega$. Find the current in resistor.



Select one correct answer

- a. 10 A
- b. 50 mA
- c. 2 A
- d. 200 mA
- e. 50 A

OPERATING SYSTEM - LINUX

1. The human-computer interface that allows textual input and output in an operating system is known as the _____.

Select one correct answer

- a. DOS
- b. command line interface
- c. graphical user interface
- d. kernel
- e. executable

2. Which command is used to remove a directory if it is empty?

Select one correct answer

- a. rdir
- b. remove
- c. rd
- d. rmdir
- e. rm

PROGRAMMING

1. What should be the input for the following routine to generate “much more” as the output?

```
v1 = input()
if(v1<1024){
    print("less")
}elseif(v1==1024){
    print("equal")
}elseif(v1>1024){
    print("more")
}else{
    print("much more")
}
```

Select one correct answer

- a. 1023
- b. 1024
- c. 1025
- d. 999999999
- e. It will never generate the desired “much more” output

2. What value will be contained in the variable x after the following statement is executed?

```
x = 12 + 6 / 2 * 3
```

Select one correct answer

- a. 13
- b. 45
- c. 21
- d. 27
- e. 0

NETWORKING

1. A technician is troubleshooting network issues and realizes that the root cause is a Layer 7 issue. What does it mean?

Select one correct answer

- a. Application specific issue
- b. Windows 7 network driver issue
- c. Faulty cable
- d. Incorrect WIFI password
- e. End user incorrectly using the system.

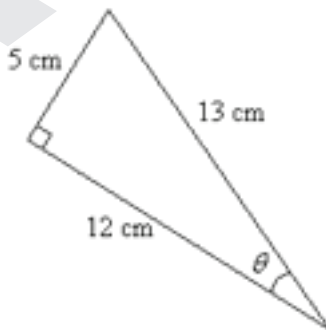
2. _____ provides information about where data should be delivered, including the data's source and destination addresses.

Select one correct answer

- a. TCP
- b. MAC
- c. SPX
- d. NTP
- e. IP

MATH AND STATISTICS

1. The value of $\cos \theta$ in the following triangle is



Select one correct answer

- a. 13/12
- b. 12/13
- c. 5/12
- d. 5/13
- e. 12/5

2. What is the mean and variance of the following group of numbers [1, 2, 3, 2, 1, 0]?

Select one correct answer

- a. mean = 1.5 ; variance = 1.1
- b. mean = 1.5 ; variance = 0.9167
- c. mean = 1.5; variance = 1.0
- d. mean = 0.9167 ; variance = 1.5
- e. mean = 1.1 ; variance = 1.5

ANSWER KEY

ELECTRONICS: 1. E, 2. D; OPERATING SYSTEMS: 1. B, 2. D; PROGRAMMING: 1. E, 2. C; NETWORKING: 1. A, 2. E;
MATH AND STATISTICS: 1. B, 2. A;