**1. How many analog input pins does an arduino uno have?**

🡪 The Arduino Uno has 6 analog input pins, labeled A0 through A5.

**2. How many ground pins in arduino uno?**

🡪 The Arduino Uno has a total of 3 Ground (GND) pins, labeled GND, GND, and GND, respectively.

**3. What is the modulation technique used in arduino?**

🡪 The Arduino Uno uses Pulse Width Modulation (PWM) as its modulation technique. PWM is a common technique used to digitally control the amount of power supplied to devices like LEDs, motors, and other components. PWM works by varying the duty cycle of a digital signal, which is the ratio of the time the signal is high compared to the total period of the signal. By adjusting the duty cycle of a PWM signal, you can effectively control the average voltage supplied to a device and therefore control its output. The Arduino Uno has 6 PWM pins, labeled with a "~" symbol next to the pin number.

4. What is the range of the ultrasonic sensor?

🡪

5. What is the model of the arduino microcontroller?

🡪 Arduino uno.

**True(T) or False(F):**

Sonar can work under water: True

Ultrasonic sensor gives us the distance of an object directly: True

Arduino USB port provides power only: False

**Fill in the gaps:**

b. Ultrasonic sensor can measure minimum 10 micrometres.

c. The burst that initiates the sound emission in ultrasonic sensor is 10 miliseconds long.

e. Arduino board contains 14 digital I/O pins.

**True(T) or False(F):**

Arduino programming uses C++ as programming language: True

LED fading is done using digitalWrite() function: False. LED fading is usually done using the analogWrite() function, which is available on the PWM (Pulse Width Modulation) pins of an Arduino board.

There are 13 digital I/O pins in the Arduino Uno board: False. The Arduino Uno board has 14 digital I/O pins, including 6 PWM pins.

**Fill in the gaps:**

b. Arduino uno has 6 analog output pins.

c. Arduino uno can supply DC voltage in the range of 7 to 12 volts.

d. Some digital I/O pins can provide analog data transfer using Pulse Width Modulation.

**True or False:**

Arduino has 6 analog input pins: True

LED fading is done using analogWrite() function: True

Some digital I/O pins can provide analog data transfer using Pulse Code Modulation: True

**Fill in the gaps:**

a. Arduino programming uses C++ as programming language.

c. The number of ground pins available in an Arduino is 3.

d. There are 14 digital I/O pins in the Arduino Uno board.

e. The argument of the delay() function represents time in milliseconds unit.