**College of Science**

**Department of computer Science and Information technology**

**Question bank / Robotics**

1. What is Arduino?
a) Programming language
b) Image editing software
c) Open-source electronics platform
d) Text editor

2. How many types of Arduino do we have?
a) 4
b) 8
c) 12
d) 16

3. What language is a typical Arduino code based on?
a) Assembly Code
b) Python
c) Java
d) C/C++

4. Arduino shields are also called as \_\_\_\_\_\_\_\_\_
a) Another Arduinos
b) Extra peripherals
c) Add on modules
d) Connectivity modules

5. What language is the Arduino IDE built on?
a) Java
b) HTML
c) C/C++
d) Python

advertisement

6. How many analog pins are used in Arduino Mega board?
a) 12
b) 16
c) 8
d) 14

7. Arduino IDE consists of 2 functions. What are they?
a) Loop() and build() and setup()
b) Build() and loop()
c) Setup() and build()
d) Setup() and loop()

8. Arduino Codes are referred to as \_\_\_\_\_\_\_\_ in the Arduino IDE.
a) sketches
b) drawings
c) links
d) notes

9. What is the default bootloader of the Arduino UNO?
a) AIR-boot
b) GAG
c) Optiboot bootloader
d) Bare box

10. What does p refer to in ATmega328p?
a) Programmable on chip
b) Power-Pico
c) Production
d) Pico-Power

11. What is the use of the Arduino.h header file?
a) It enables the programmer to access all of Arduino’s core functionality
b) It doesn’t have any use and can be omitted at any point of time in the code
c) It gives root access to the microcontroller’s file system
d) It allows other people to create libraries for the Arduino code

12. What is the use of the Vin pin present on some Arduino Boards?
a) To ground the Arduino Board
b) To power the Arduino Board
c) To provide a 5V output
d) Is used for plugging in 3V supply

13. What is the correct execution process of an Arduino code?
a) Editor->Preprocessor->Compiler
b) Preprocessor->Editor->Compiler
c) Compiler->Preprocessor->Editor
d) Editor->Compiler->Preprocessor

14. What is the microcontroller used in Arduino UNO?
a) ATmega32114
b) AT91SAM3x8E
c) ATmega2560
d) ATmega328p

15. Which board is the first to use a microcontroller within the build USB?
a) RedBoard
b) Leonardo
c) LilyPad
d) UNO

16. Which Arduino Board contains an onboard joystick?
a) Arduino Nano
b) Arduino UNO
c) Arduino Esplora
d) Arduino Due

17. What is the function of the IOREF pin on the Arduino UNO?
a) To take input voltage and set it as a reference for all GPIO operations
b) To provide a constant 12V DC supply
c) To provide ground
d) To provide the voltage corresponding to the standard GPIO working voltage of the board

18. Which processor supports the Arduino Zero?
a) ARM Cortex M0+
b) ARM Cortex M3
c) Atmega32u4
d) Atmega328P

19. Which software is used to upload the Arduino Sketches to the board?
a) avrgcc
b) g++
c) cpython for windows
d) avrdude

20. What is the use for the 2 serial pins on the Arduino Diecimila?
a) To send PWM signals
b) To send and receive Serial TTL signals
c) To send and receive GPIO digital signals
d) To receive analog signals

21. Which Arduino Boards use the Atmega2560?
a) Arduino Micro and Due
b) Arduino Nano and Fio
c) Arduino Mega and Mega ADK
d) Arduino Uno and Robot

22. What is the operating voltage of Atmega328?
a) 1.9V to 5V
b) 1.8V to 5.5V
c) 1.1V to 5V
d) 12V to 9V

23. Which Arduino Boards use the Atmega32U4?
a) Arduino Uno
b) None Mega
c) Arduino Micro
d) Arduino Leonardo

24. Is the Arduino code an Object-Oriented programming language or a Procedural programming language?
a) The Arduino Code follows the Top-Down Procedural ideology
b) The Arduino Code follows a custom Procedural Ideology
c) The Arduino Code follows the Object-Oriented ideology
d) The Arduino Code follows the Bottom-Up Procedural ideology

25. What is the difference between an IDE and a compiler?
a) The compiler executes the code while the IDE gives a graphical environment for writing the code
b) The compiler links the code to the respective files and the IDE takes it from there
c) The compiler and the IDE are the same thing
d) The IDE executes the code while the compiler gives a graphical environment for writing the code

26. What will be the output of the following Arduino code?

#define X 10;

void setup(){

 X=0;

 Serial.begin(9600);

 Serial.print(X);

}

void loop(){

 //Do nothing…

}

a) 0xAB
b) 0xa
c) 0
d) Error

27. Where does the Arduino IDE search if it needs to find out the Name of a type of Arduino Board?
a) Arduino.h
b) build.txt
c) boards.txt
d) build.core

28. How many times does the setup() function run on every startup of the Arduino System?
a) 4
b) 5
c) 2
d) 1

29. Which of the following statements is not true when dealing with the Firmata library?
a) The Firmata Library uses the Firmata Protocol for communicating data
b) The Firmata Library uses the Midi Message Format
c) The Firmata Library can only be used on an Arduino Uno
d) The Firmata Library is used to establish communications between the Arduino and the Desktop

30. What is the output of “pin1” if “pin2” is sent “1011” where 1 is 5V and 0 is 0V?

1. int pin1 = 12;
2. int pin2 = 11;
3. void setup() {
4. pinMode(pin1, OUTPUT);
5. pinMode(pin2, INPUT);
6. Serial.begin(9600);
7. }
8. void loop() {
9. if(digitalRead(pin2)==1) {
10. digitalWrite(pin1,LOW);
11. }
12. else if(digitalRead(pin2)==0) {
13. digitalWrite(pin1,HIGH);
14. }
15. }

a) 1110
b) 0100
c) 1111
d) 1011

31. Which Arduino Board does the SigFox Library work with?
a) Arduino MKRFOX1200
b) Arduino MKRZero
c) Arduino MKRFOX1230
d) Arduino MKR1000

32. What technology does the OV7670 Camera Module use for image sub-sampling?
a) ConstPix
b) Activarr
c) Tidal
d) VarioPixel

33. What will be the output of the following Arduino code?

void main() {

 int a = 0;

 double d = 10.21;

 printf("%lu", sizeof(a + d));

}

void loop() {}

a) 10.21
b) 8
c) null
d) 23

34. What is the use of the ESP8266 WiFi Module?
a) Network Provider
b) Switches circuits
c) Evaluates air pressure
d) Monitors Motion

35. What is the full form of EEPROM?
a) Electrically Encoded Programmable Read Only Memory
b) Encrypted Electronic Programmable Read Only Memory
c) Electrically Erasable Programmable Read Only Memory
d) Electronic Embedded Programmable Read Only Memory

36. Why is the Arduino Mega more a viable solution when dealing with complex projects, than the Arduino UNO?
a) More flash memory on the Arduino Mega
b) Higher power rating on the Arduino Mega
c) Higher SRAM on the Arduino Mega
d) More number of GPIO pins on the Arduino Mega

37. The Atmega168 is an \_\_\_\_\_\_\_\_ bit chip.
a) 32
b) 64
c) 8
d) 16

38. Why does every compilation of a source code in Arduino check for previous compilations?
a) To copy the previously generated “.o” files
b) To relocate the previously generated “.o” files
c) To delete the previously generated “.o” files
d) To use the previously generated “.o” files

39. What type of signal does the analogWrite() function output?
a) Pulse Code Modulated Signal
b) Frequency Modulated Signal
c) Pulse Width Modulated Signal
d) Pulse Amplitude Modulated Signal

40. What is the objective of the code given below if it is executed on the Arduino Uno?

1. #include<EEPROM.h>
2. int pin=13;
3. void setup() {
4. pinMode(pin,OUTPUT);
5. Serial.begin(9600);
6. }
7. void loop() {
8. for(int i=0;i<EEPROM.length();i++) {
9. EEPROM.write(i, 1);
10. }
11. digitalWrite(pin,HIGH);
12. exit(0);
13. }

a) Clear EEPROM
b) Fill EEPROM with 1’s
c) Export EEPROM data
d) Fill EEPROM with 0’s

41. What is the use of the SD.h Library in Arduino?
a) To communicate with the computer
b) To communicate with the internet
c) To communicate with the SD Card Module
d) To communicate with another microcontroller

42. What is the use of the Ethernet library?
a) To connect the Arduino to Ethernet
b) To connect the Arduino to Li-Fi
c) To connect the Arduino to Bluetooth
d) To connect the Arduino to Wi-Fi

43. What is the purpose of the following Arduino code?

1. void setup() {
2. Seria.begin(9600);
3. }
4. void setup() {
5. Serial.write(40);
6. }

a) Send a signal to pin 40 on the Arduino board
b) Send a octal number of 40 through the Serial pins
c) Send a byte with value 40 through the Serial pins
d) Send a hexadecimal number of 40 through the Serial pins

44. Which chipset is the LCD library for Arduino based on?
a) Hitachi HDD4780
b) Hitachi HD46780
c) Hitachi HD45780
d) Hitachi HD44780

45. What is the resolution of the micros() function on the Arduino Nano?
a) 7 Microseconds
b) 4 Microseconds
c) 6 Microseconds
d) 2 Microseconds

46. What is the use of the Interrupt Service Routine in an Arduino?
a) To boot up the arduino
b) To exit any code that is running
c) To automate functions
d) To make more memory

47. What is the output of the program given below if a voltage of 5V is supplied to the pin corresponding to the A0 pin on an Arduino UNO?

void setup() {

 Serial.begin(9600);

 pinMode(A0, INPUT);

}

void loop() {

 int s = analogRead(A0);

 Serial.println(s);

}

a) 0
b) 1024
c) null
d) Error

48. What mode should we put the Arduino pin to, in order for object detection to work with the Ultrasonic Sensor?
a) TDM
b) PCM
c) Analog
d) Digital

49. What will happen if we supply a voltage of 25V to the Vcc of the Nokia 5110 GDM?
a) Module will function normally
b) Damage is caused
c) Module will shut down
d) Module will not respond for the time the voltage is applied

50. Which port on any Arduino board should be connected to the Key Port on the Adafruit FONA 3G+GPS Breakout?
a) Gnd
b) Any Analog Pin
c) Vcc
d) Any Digital Pin

51. What is the way of throwing an error using preprocessing directives to the Arduino Compiler and forcing it to stop compilation?
a) #warning
b) #stop
c) #cut
d) #error

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