

2023

PHYSICS — GENERAL

Paper : SEC-B-1

(Syllabus : 2019-20)

[Arduino]

Full Marks : 20

The figures in the margin indicate full marks.

*Candidates are required to give their answers in their own words
as far as practicable.*

Answer **any ten** questions each carrying 2 marks.

Choose the correct option.

1. What type of signal does the analogWrite() function output?
 - (a) Pulse code modulated signal
 - (b) Pulse centred modulated signal
 - (c) Pulse width modulated signal
 - (d) Pulse amplitude modulated signal.
2. _____ is the language used by the Arduino IDE to code easily.
 - (a) C
 - (b) C++
 - (c) Java
 - (d) Python.
3. Change of voltage of LM35 temperature sensor for the change of 2°C will be
 - (a) 20 mV
 - (b) 24 mV
 - (c) 30 mV
 - (d) 40 mV.
4. How many times does the setup() function run on every startup of the Arduino system?
 - (a) 4
 - (b) 5
 - (c) 2
 - (d) 1.
5. At which frequency the Arduino mega works?
 - (a) 12 kHz
 - (b) 16 Mhz
 - (c) 14 Mhz
 - (d) 18 Mhz.

6. The ATmega 168 is capable of processing _____ bits of data at a time.
(a) 32 (b) 64
(c) 8 (d) 16.
7. Arduino Uno has a memory of _____ SRAM.
(a) 2 Kb (b) 8 Kb
(c) 4 Kb (d) 16 Kb.
8. A program written with the IDE for Arduino is called
(a) IDE source (b) Sketch
(c) Cryptography (d) Source code.
9. The default method(s) in Arduino program is/are
(a) only loop() (b) only setup()
(c) setup() and loop() (d) can be either loop() or setup().
10. In Arduino, a command delay (3000) leads to the delay of
(a) 30 seconds (b) 3000 seconds
(c) 3 seconds (d) 3 minutes.
11. The numbers of input analog and digital I/O pins in Arduino UNO are respectively
(a) 6 and 14 (b) 14 and 6
(c) 5 and 14 (d) 6 and 12.
12. In the programming of Arduino IDE 'digitalWrite (LED, LOW)' means
(a) Turn the LED off (b) Turn the LED on
(c) blink the LED (d) All of these.