Avinashilingam Institute for Home Science and Higher Education for Women
(Deemed to be University Estd. u/s 3 of UGC Act 1956, Category 'A' by MHRD)
Re-accredited with 'A++' Grade by NAAC. Recognised by UGC Under Section 12B
Coimbatore - 641 043, Tamil Nadu, India

Continuous Internal Assessment Test II – April 2025
VI SEMESTER

Class : III UG **Time: 2 hours**
Major : Computer Applications **Maximum Marks: 60**

21BCAC28 IoT Design and Applications

Course Outcomes:

1. Identify the components of IoT.
2. Comprehend the schemas for real time applications in IoT.
3. Analyze the building blocks of internet of things and characteristics.
4. Gain programming knowledge in Raspberry Pi with Python.
5. Understand different IoT based real time applications.

Part-A **6x1=6**
Choose the correct answer

1. Which programming language is commonly used with Raspberry Pi? CO4K1
   a. C++ b. Java c. Python d.Ruby
2. Which among the following instruction set is used in Raspberry Pi? CO4K2
   a. MSP b. AVR c. X86 d. ARM
3. Which of the following has a real time clock? CO4K3
   a. Adafruit b. Galileo Gen 2 c. Raspberry Pi 5 d. Arduino
4. Raspberry Pi uses one among the following for power supply? CO5K3
   a. Internal battery b. USB connection c. Charger d. Adapter
5. Galileo Gen 2 board was developed by? CO5K2
   a. Intel b. Atmel c. Motorola d. Dallas
6. What is the Arduino UNO? CO5K2
   a. Software b. Hardware c. Hardware and software d. Protocol

Part- B **3x6=18**
Answer ALL Questions

7. a. Explain with program about Programming Raspberry Pi with Python. CO3K1
   (or)
   b. Write a C program to Interface Temperature sensor with Intel Galileo Gen 2 and display the Temperature on LCD. CO4K2

8. a. Write in brief about Programming Connected Devices? CO4K2
   (or)
   b. Discuss on how C programming is used to sense the intensity of light and print on the screen. CO4K1

9. a. Discuss on real time applications of IoT in health care and wearables. CO5K1
   (or)
   b. Write a C program to Interface Bluetooth module with Intel Galileo Gen 2 and showing Communication between Galileo Gen 2 and Android Device. CO5K1

Part-C **3x12=36**
Answer ALL questions

10. a. Explain with example the application of user defined functions in Arduino. CO4K2
    (or)
    b. Explain Raspberry Pi with Raspbian operating system. CO5K2

11. a. Elaborate on Galileo board and the Procedure for creating and compiling C source code with Intel Galileo Gen2 board. CO5K1
    (or)
    b. Explain the real time applications of IoT in smart cities. CO4K1

12. a. Explain with C source code to Interface LCD with Intel Galileo Gen2 and display "HELLO" on LCD display. CO4K1
    (or)
    b. Discuss on IoT Temperature Controller case study. CO5K1

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Staff in-charge: Dr. V. Kumutha