

Gambal



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 (now MoE)
Re-accredited with 'A++' Grade by NAAC. CGPA 3.65/4, Category I by UGC
Coimbatore - 641 043, Tamil Nadu, India

Bachelor's Degree Arrear Examination – November 2025
IV Semester

Batch: 2023
Major: *Psychology*

Time: 3 Hours
Max. Marks: 100

23BCSGE5 - Introduction to Internet of Things

Course Outcomes:

1. Understand the fundamentals of IoT.
2. Understand the various applications of IoT.
3. Enable to learn about different communication modules.
4. Understand the basics of cloud platforms for IoT.
5. To work with Arduino and different sensors.

Part-A

Answer All the Questions
Choose the correct answer

10x1=10

1. IoT stands for _____ CO1K1
a) Internet of Things b) Internet of Technology
c) Interface of Things d) Integration of Technology
2. Which of the following is an IoT enabling technology? CO2K2
a) Payroll Management b) Cloud Computing c) Cash Flow Analysis d) MS Word
3. Which of the following is a common application of IoT technology? CO2K2
a) Automated email systems b) Voice-activated shopping c) Smart homes d) Text messaging
4. Which of these sensor is used in IoT systems for detecting movement? CO2K2
a) Humidity sensor b) Pressure Sensor c) Motion Sensor d) GPS Sensor
5. Which of the following communication medium supports highest data rate? CO3K2
a) Ethernet b) Bluetooth c) Optical Fibre d) Wi-Fi
6. Smoke detectors in IoT are useful for: CO2K1
a) Agriculture b) Fire Safety c) Street Lighting d) Water Quality Monitoring
7. How many main service models of cloud computing? CO4K1
a) Four b) Three c) Seven d) Five
8. Which protocol is commonly used in IoT communication? CO3K2
a) HTTP b) MQTT c) CoAP d) Sensor
9. Which language is mostly used in Arduino programming? CO5K2
a) Java b) Embedded C/C++ c) Python d) PHP
10. Which library is used to interface sensors in Arduino? CO5K2
a) Arduino Libraries b) Java SDK c) Python Numpy d) Embedded C/C++

Part-B

5 × 6 = 30

Answer All the Questions

Each answer should not exceed 400 words or two pages

11. a. Explain the components of IoT in brief CO1K1
(or)
11.b. Describe the 3-layer design architecture of IoT. CO1K2
12. a. What are the applications of IoT in Smart cities? Give examples CO2K2
(or)
12. b. Describe the role of IoT in Healthcare with examples CO2K2
13. a. Write a note on Wireless Networking. CO3K1
(or)
13.b. Write a note on RFID technology and Bluetooth. CO3K1
14. a. What are the Benefits of Cloud Computing in real world scenario ? CO4K1
(or)
14. b. Discuss the role of ThingSpeak in IoT projects. CO4K1
15. a. List and explain different types of Arduino boards. CO5K1
(or)
15. b. Discuss the role of Arduino Libraries in IoT projects. CO5K1

Part-C

5×12=60

Answer All the Questions

Each answer should not exceed 800 words or four pages

- 16.a. Explain the Concepts of IoT and detailed note on the architecture of IoT with a neat diagram CO1K2
(or)
16. b. Elaborate on IoT enabling Technologies with suitable examples CO1K2
17. a. Elucidate the working principle of Smoke Detector. CO2K3
(or)
17.b. Describe the role of IoT in Air Pollution and Weather Monitoring. Explain in detail. CO2K3
18. a. Explain in detail about Communication Modules and their types. CO2K3
(or)
18.b. Explain MQTT its advantages and applications. CO3K2
- 19.a. Discuss ThingSpeak platform in detail with configuration steps and its advantages. CO4K2
(or)
19.b. Elaborate on Cloud Computing services used in IoT. CO4K2
- 20.a. Elucidate on Embedded C programming for Arduino. CO5K2
(or)
20.b. Explain interfacing Arduino with sensors: LED, DHT11, and Ultrasonic. CO5K3
