PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
MSc DEGREE EXAMINATION DECEMBER 2023
(Third Semester)

Branch – **COMPUTER SCIENCE**

INTERNET OF THINGS

Time: Three Hours   Maximum: 50 Marks

SECTION-A (5 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** marks   (5 x 1 = 5)

1   Which of the following is used to capture data from the physical world in IoT devices?
   (i) Sensors   (ii) Actuators
   (iii) Microprocessors   (iv) Microcontrollers

2   Which of the following protocols is used to link all the devices in the IoT?
   (i) HTTP   (ii) UDP
   (iii) Network   (iv) TCP/IP

3   The Smart Fitness clothing mainly has _____ device.
   (i) Battery   (ii) Bluetooth
   (iii) Sensors   (iv) Internet

4   Which of the following is true about a physical entity?
   (i)   It is a discrete and identifiable entity in the physical environment
   (ii) It is a representation of the Physical Entity in the digital world
   (iii) None of the above
   (iv) All of the above

5   Python supports the creation of anonymous functions at runtime, using a construct called _____
   (i) pi   (ii) anonymous
   (iii) lambda   (iv) none of the mentioned

SECTION - B (15 Marks)
Answer **ALL** Questions
ALL Questions Carry **EQUAL** Marks   (5 x 3 = 15)

6   a   Explain the Internet of Everything (IoE).
                              OR
    b   Discuss the various characteristics of IoT.

7   a   Explain about MQTT.
                              OR
    b   Analyze about DDS protocol.

8   a   Illustrate about renewable energy systems in IoT.
                              OR
    b   Justify how does remote vehicle diagnosis work.

9   a   State the Communication Protocols in Operational View Specification.
                              OR
    b   Explain the Service Specifications in IoT platform design.

10 a   Explain about Tuples in Python Data Structure.
                              OR
    b   Produces features of Python dictionaries.

SECTION -C (30 Marks)
Answer **ALL** questions
ALL questions carry **EQUAL** Marks   (5 x 6 = 30)

11 a   Assess the challenges in IoT.

OR

   b   Interpret the architecture of M2MIoT.

12 a   Enumerate the features of AMQP protocol in IoT.

OR

   b   Compare COAP and MQTT protocols.

13 a   Enumerate the most common IoT applications.

OR

   b   Which wireless technology can be an Internet of Things sensor for wearable fitness devices? Justify.

14 a   Interpret the Domain Model Specification in IoT platform design.

OR

   b   Elucidate the Device & Component Integration.

15 a   Analyze the different types of control flow statements available in Python with flowcharts.

OR

   b   Enumerate the ord(), hex(), oct(), complex() and float() type conversion functions with examples.

Z-Z-Z   END