18ELP22

Exam Date & Time: 26-Sep-2020 (02:00 PM - 05:30 PM)

PSG COLLEGE OF ARTS AND SCIENCE

Note: Writing 3hrs: Checking & Inserting Image : 30mins

MSc DEGREE EXAMINATION MAY 2020
(Fourth Semester)

Branch - APPLIED ELECTRONICS

IoT AND ITS APPLICATIONS [18ELP22]

Marks: 75

Duration: 210 mins.

SECTION A

Answer all the questions.

1)   Which one of the following IoT enabling technology is used for collecting, organizing and analyzing large sets of data?
(i) Wireless Sensor Network
(ii) Cloud computing
(iii) Big data analytics
(iv) Embedded systems   (1)

2)   _____ evolved from M2M communication.
(i) Cloud computing
(ii) IoT
(iii) Grid computing
(iv) Embedded systems   (1)

3)   In BLE, B stands for _____
(i) Bio-computing
(ii) Bit
(iii) Bluetooth
(iv) Byte   (1)

4)   Which of the following communication is used to allows wireless data transfer between two portable devices in close proximity?
(i) Zigbee
(ii) NFC
(iii) VANET
(iv) LORA   (1)

5)   The final product of Embedded system software is
(i) GEX file
(ii) ROM Image
(iii) Object file
(iv) .Asm file   (1)

6)   How many common SoC architectures for IoT?
(i) 4   (1)

(ii) 5
(iii) 3
(iv) 2

7)   In IoTOS, which is from Ubuntu community?
          (i) Zephyr
          (ii) Huawei LightOS
          (iii) Snappy   (1)
          (iv) Tiny OS

8)   The Beagle Bone Black is a _____ board computer like the Raspberry Pi.
          (i) Single
          (ii) double
          (iii) multi   (1)
          (iv) all of these

9)   _____ is the process of extracting knowledge structures from continuous and rapid
          data records.
          (i) Text Mining
          (ii) Image Mining   (1)
          (iii) Data Stream Mining
          (iv) Big Data

10)   Data-intensive systems rely on _____ as the core process to access and retrieve data.
          (i) Querying
          (ii) Clustering
          (iii) Archiving   (1)
          (iv) Pre-processing

SECTION B

Answer all the questions.

11)   Describe the different levels of IoT systems.

                                                                          (7)

    a)
    [OR] Summarise about IoT network Services.
    b)   (7)

12)   Explain the term : Zigbee.

                                                                          (7)

    a)
    [OR] Discuss VANETS.
    b)   (7)

13)   How devices are said to be embedded devices and give examples?

                                                                          (7)

    a)
    [OR] Discuss about S0Cs.
    b)   (7)

14)   Explain the various operating systems for IoT applications.   (7)

a)

[OR]   Discuss about Embedded Linux.

b)   (7)

15)   Explain the data types in IoT.

                                                                       (7)

a)

[OR]   Describe the data acquisition in Sensor networks.

b)   (7)

SECTION C

Answer 3 out of 5 questions.

16)   Explain in detail the Basic architecture of IoT with neat sketch.

                                                                     (10)

17)   Discuss about IEEE 802.11 – LAN Protocols with necessary diagram.

                                                                      (10)

18)   With a neat diagram explain the architecture of CC32XX.

                                                                      (10)

19)   Explain about server side components for IoT applications.

                                                                      (10)

20)   Discuss the challenges in managing the IoT data.

                                                                      (10)

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