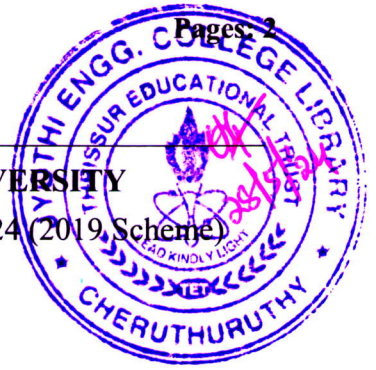


Reg No.: \_\_\_\_\_

Name: \_\_\_\_\_

**APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY**  
 Eighth Semester B.Tech Degree (R, S) Examination May 2024 (2019 Scheme)



Course Code: MRT414

Course Name: IOT AND APPLICATIONS

Max. Marks: 100

Duration: 3 Hours

**PART A***Answer all questions, each carries 3 marks.*

Marks

- |    |  |     |
|----|--|-----|
| 1  | What are the IoT components for implementation?                        | (3) |
| 2  | Compare Hydraulic and Pneumatic actuators.                             | (3) |
| 3  | Write a note on RFID technology.                                       | (3) |
| 4  | What are Wireless Nano sensor networks?                                | (3) |
| 5  | Explain the difference between FANET and the existing Ad hoc Networks. | (3) |
| 6  | How communications achieved in UAV?                                    | (3) |
| 7  | Explain private cloud deployment model.                                | (3) |
| 8  | Explain any two applications of fog computing.                         | (3) |
| 9  | Give a brief description about HAN elements.                           | (3) |
| 10 | Write a short note on smart dust.                                      | (3) |

**PART B***Answer any one full question from each module, each carries 14 marks.***Module I**

- |    |   |      |
|----|---|------|
| 11 | a) Discuss in detail about the Characteristics of Sensors in IoT. | (14) |
|----|---|------|

**OR**

- |    |  |      |
|----|--|------|
| 12 | a) Explain in detail about any three IoT data protocols. | (14) |
|----|--|------|

**Module II**

- |    |   |      |
|----|---|------|
| 13 | a) Describe in detail about wireless multimedia sensor networks | (14) |
|----|---|------|

**OR**

- |    |   |      |
|----|---|------|
| 14 | a) Elucidate about Zigbee and Bluetooth Technology. | (14) |
|----|---|------|

**Module III**

- |    |  |      |
|----|--|------|
| 15 | a) Explain the concept of FANET in IoT, highlighting its design considerations | (14) |
|----|--|------|

**OR**

- |    |  |      |
|----|--|------|
| 16 | a) Explain the working of a Unmanned Aerial Vehicle in detail. | (14) |
|----|--|------|

**Module IV**

- 17 a) Explain any five Cloud computing deployment models (14)

**OR**

- 18 a) What is the role of fog computing in following area (14)

- i. Smart Homes
- ii. Smart Vehicle
- iii. Smart Cities

**Module V**

- 19 a) Explain the application of IIoT in health care service industry. (14)

**OR**

- 20 a) How IIoT helps in manufacturing industry to increase the productivity. (14)

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