

315365

12526

3 Hours / 70 Marks

Seat No.

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- Instructions* –
- (1) All Questions are *Compulsory*.
 - (2) Answer each next main Question on a new page.
 - (3) Illustrate your answer with neat sketches wherever necessary.
 - (4) Figures to the right indicate full marks.
 - (5) Assume suitable data, if necessary.
 - (6) Use of Non-programmable Electronic Pocket Calculator is permissible.
 - (7) Mobile Phone, Pager and any other Electronic Communication devices are not permissible in Examination Hall.

Marks

- 1. Attempt any FIVE of the following: **10****
- a) Write the name of enabling technologies for IOT.
 - b) Define IOT. Give one example.
 - c) List different types of sensors in IOT.
 - d) Draw the pin diagram of PIR sensor.
 - e) Write the names of 7 layers in OSI.
 - f) Write any four features of arduino.
 - g) List the sensors used in Air Quality Monitoring System of IOT.

P.T.O.

- 2. Attempt any THREE of the following: 12**
- a) State characteristics of IOT with example.
 - b) List different types of sensors and explain IR sensor.
 - c) Describe process specification for Home Automation System.
 - d) Explain interfacing of Arduino with sensor.
- 3. Attempt any THREE of the following: 12**
- a) Explain an IOT device with neat diagram.
 - b) Explain the relation between WSN and IOT with example.
 - c) Explain purpose and requirement specification of IOT design.
 - d) Write the names of different components on Arduino. Write the function of analog and digital pins.
- 4. Attempt any THREE of the following: 12**
- a) State different IOT enabling technologies which play a key role and explain WSN.
 - b) Define middleware. Explain RFID middleware in detail.
 - c) Describe open system interconnection (OSI) model.
 - d) Explain application of IOT for retail.
 - e) Write IOT applications used in health and fitness monitoring.
- 5. Attempt any TWO of the following: 12**
- a) Explain operational view specification of IOT design with neat diagram.
 - b) Explain Raspberry Pi interfaces. Write features of Raspberry Pi.
 - c) Explain applications of IOT in home automation system.
- 6. Attempt any TWO of the following: 12**
- a) Write the different steps involved in Design methodology of IOT. Explain functional view specification.
 - b) Explain cloud base IOT platforms.
 - c) Explain applications of IOT in agricultural automation system.
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