

22588

22232

3 Hours / 70 Marks

Seat No.

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- Instructions :**
- (1) All Questions are *compulsory*.
  - (2) Illustrate your answers with neat sketches wherever necessary.
  - (3) Figures to the right indicate full marks.
  - (4) Assume suitable data, if necessary.
  - (5) Use of Non-programmable Electronic Pocket Calculator is permissible.

**Marks**

**1. Attempt any FIVE of the following :**

**10**

- (a) List the characteristics of IoT.
- (b) Give any two applications of IR sensor.
- (c) List different IoT physical devices.
- (d) State the examples of IoT used in Logistics.
- (e) Define Disrupting Control in IoT.
- (f) Give any two applications of IoT for Agriculture.
- (g) Compare IoT and M2M.

**2. Attempt any THREE of the following :**

**12**

- (a) What is the Role of Things and Internet in IoT ?
- (b) Explain applications of IoT for Retail.
- (c) Describe Process specification for Home Automation IoT Systems.
- (d) Explain Building blocks of IoT device.



- 3. Attempt any THREE the following : 12**
- (a) List the IoT enabling technologies and explain any two.
  - (b) Explain any two IoT protocols.
  - (c) Explain Raspberry pi interface with any one sensor.
  - (d) List the environmental issues relating to IoT and explain any one in detail.
  - (e) Illustrate characterizing the Internet of Things.
- 4. Attempt any THREE of the following : 12**
- (a) State the procedure for deploying IoT application.
  - (b) State the specifications of any one Arduino board.
  - (c) Explain any two magnet relays and switches used in IoT.
  - (d) Write IoT application used in health & fitness monitoring.
  - (e) Describe the information model of the home automation IoT system.
- 5. Attempt any TWO of the following : 12**
- (a) Explain the role of Cloud Computing and Big Data in Internet of Things.
  - (b) Explain any two sensors and their use in IoT.
  - (c) Explain the relation between WSN & IoT with example.
- 6. Attempt any TWO of the following : 12**
- (a) Explain cloud base IoT platforms.
  - (b) Define crowd sourcing. List advantages and disadvantages of crowd sourcing.
  - (c) What effect will the Internet of things (IoT) have on our daily lives ? Explain with any one example of smart device.
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