

22588

23124

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.

Marks

1. Attempt any FIVE of the following :

5 × 2 = 10

- (a) State any two examples of IOT.
- (b) Give any two applications of IOT.
- (c) State basic building blocks of IOT.
- (d) List different types of uses of IOT in health care.
- (e) Define open internet of things.
- (f) List two applications of internet of things for environment system.
- (g) State full form of : (i) SCADA (ii) WSN.

2. Attempt any THREE of the following :

3 × 4 = 12

- (a) State and explain characteristics of IOT.
- (b) Give in detail application of internet of things in agriculture system.
- (c) State procedure for deploying IOT application.
- (d) List and explain Arduino interfaces.



- 3. Attempt any THREE of the following :** **3 × 4 = 12**
- (a) List different IOT enabling technologies which play a key-role & explain wireless sensor networks.
 - (b) List different protocols for IOT and explain any one of them.
 - (c) List and explain Raspberry pi interface.
 - (d) Write IOT applications used in health and fitness monitoring (any four).
 - (e) Explain ideal ethics for IOT.
- 4. Attempt any THREE of the following :** **3 × 4 = 12**
- (a) Describe domain model of the home automation IOT systems.
 - (b) Explain cloud base IOT platform.
 - (c) Explain the relays and magnets used in IOT.
 - (d) Explain home automation with one example.
 - (e) Explain IOT level specification for home automation.
- 5. Attempt any TWO of the following :** **2 × 6 = 12**
- (a) Explain role of wireless sensor network and communication protocols in internet of things.
 - (b) Explain any two middleware technologies used in IOT.
 - (c) Explain design methodology for IOT.
- 6. Attempt any TWO of the following :** **2 × 6 = 12**
- (a) Explain interfacing of any one hardware with sensor.
 - (b) Explain importance of privacy and internet of things.
 - (c) Explain application of IOT in retail industry.
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