

(3 hours)

[80 Marks]

N.B.:

1. Question No.1 is compulsory.
2. Attempt any **Three** questions out of remaining **Five** questions.
3. Figures to the right indicate full marks.
4. Assume any suitable data wherever required but justify the same.

- Q.1 a) Write a short note on RFID sensors. 5
 b) List and explain in short IoT applications. 5
 c) Write a short note on Raspberry Pi programming for IoT. 5
 d) Write a short note to give abstract view of Internet of Things. 5
- Q.2 a) Write a detail note on NFC and its use in IoT applications. 10
 b) Write a detail note on secured communication in IoT applications for data transfer and its importance. 10
- Q.3 a) Explain Wireless Sensor Network in IoT paradigm. 10
 b) Explain in detail steps involved in Prototype design of IoT. 10
- Q.4 a) Write a note on importance of networking protocol LoWIPv6 in IoT context. 10
 b) Explain in detail Arduino and sensors and interfacing for it. 10
- Q.5 a) Explain a multi agent system in IoT paradigm. 10
 b) Write a detail note on Business Processes in IoT. 10
- Q.6 Write a detail note on (any two) 20
 a) Smart energy applications and IoT technologies.
 b) Explain challenges in developing IoT applications.
 c) Smart homes and IoT.