

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VIII (NEW) EXAMINATION – WINTER 2018****Subject Code: 2180709****Date: 29/11/2018****Subject Name: Iot And Applications****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) What is M2M communication? Why M2M has shifted to the Internet of Things? **03**
 (b) What is Internet of Things? What are the applications of IoT? **04**
 (c) Explain the architecture of the Internet of Things. **07**
- Q.2** (a) Which are the network and communication technologies can be used to implement an IoT application? **03**
 (b) What is a cloud? What is the role of cloud platforms in IoT? **04**
 (c) Explain reference model of Internet of Things. **07**
- OR**
- (c) Which are Hardware and Software components of IoT? How do these components get synchronized in an IoT based application? **07**
- Q.3** (a) What is the value chain of Internet of Things? **03**
 (b) What are data Accumulation and data Abstraction in a smart city application? **04**
 (c) What are the security and private issues of IoT? Explain using suitable case scenario. **07**
- OR**
- Q.3** (a) Explain functional model of IoT. **03**
 (b) What is middleware? Explain GAMBAS adaptive middleware. **04**
 (c) Explain challenges of the Internet of Things. **07**
- Q.4** (a) Differentiate M2M and IoT. **03**
 (b) What are the research issues of Internet of Things? **04**
 (c) Explain smart parking system with architecture of system. **07**
- OR**
- Q.4** (a) Explain IoT domain model. **03**
 (b) What are Big data and Big data analytics? How the data captured by an IoT system can be analyzed? **04**
 (c) Which is a smart city? What are the features of IoT based smart city? Explain role of IoT in making smart city. **07**
- Q.5** (a) What is FP7 projects? How these projects are helpful in Implementing IoT systems? **03**
 (b) What is smart Health? Discuss use of IoT in smart health using all use cases of the health industry. **04**
 (c) What is a smart home? What are the functions of IoT based smart home? Which sensors are required to make smart home? **07**
- OR**
- Q.5** (a) What are the governance issues of Internet of Things? **03**
 (b) How does an Internet of Things conserve the electric energy? Discuss with a suitable case scenario. **04**
 (c) What is smart application? How Oil and Gas Industry can be smart using an Internet of Things? Take all possible use cases of Oil and Gas industry into consideration. **07**
