

Duration: 3hrs

Max Marks: 80

- N.B. : (1) Question No 1 is Compulsory.
 (2) Attempt any three questions out of the remaining five.
 (3) All questions carry equal marks.
 (4) Assume suitable data, if required and state it clearly.

- 1 **Attempt any FOUR** [20]
 - A List the various Communication models in IoT? Explain the communication model that is implemented in CoAP. [5]
 - B Explain the following REST Architectural Constraints: Stateless Constraint and Cache-able Constraint [5]
 - C List and Draw the Security Functional Group Components in IoT reference architecture [5]
 - D List the various components of any IoT System. Explain the role of controller service and Web Service with reference to the components of IoT System. [5]
 - E Examine how the following electrical parameters can be used as a part of sensing Technology: a) Capacitance and b) reverse saturation current of PN Junction [5]
- 2 A Compare and Contrast the various Phases of Analytics [10]
 - B Contrast the various Data Categorizations for storage in IoT Systems. Discuss the various Cloud deployment models available. [10]
- 3 a List the various features of CoAP. Explain how PSK provides security measures in relation to DTLS in CoAP [10]
 - b Compare and contrast CoAP and HTTP [10]
- 4 a Draw the information model for any Weather Monitoring IoT System. Detail any two Entities or Objects or Concepts defined in the domain model specification [10]
 - b What do you understand by the term 'Functional View Specification'? Detail the any two Functional Groups with relevant example. [10]
- 5 a Compare and Contrast the various Communication APIs [10]
 - b Discuss the purpose of Online Analytical Processing in Analytics with relevant examples. [10]
- 6 a What do you mean by Pub-Sub model? Detail the operation flow of MQTT protocol. [10]
 - b Draw the Layered Attacker Model and possible attacks in IoT/M2M [10]

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