Program: Information Technology
Examination: BE Semester VIII
Course Code: ITC802 and Course Name: **Internet of Everything**

Time: 2 hour 30 minutes   Max. Marks: 80

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Q1.	Choose the correct option for following questions. All the Questions are compulsory and carry equal marks
1.	------------------ act as primary devices to collect data from the environment.
Option A:	Machines
Option B:	Antenna
Option C:	Sensors
Option D:	Switch
2.	Which RFID tag does not need an embedded power?
Option A:	Active
Option B:	Passive
Option C:	Semi-Passive
Option D:	Semi-Active
3.	Pure ALOHA is based on
Option A:	CDMA
Option B:	TDMA
Option C:	FDMA
Option D:	SDMA
4.	MQTT topics are
Option A:	Simple floating point
Option B:	Simple integer
Option C:	Simple symbol
Option D:	Simple string
5.	CoAP provides which of the following requirements?
Option A:	Multicast support, Low overhead and Simplicity
Option B:	Low overhead and multicast support
Option C:	Simplicity and low overhead
Option D:	Multicast support and simplicity
6.	X-MAC differs MFP – Micro frame preambling with respect to:
Option A:	Receiver cuts the preamble into micro-frames, and listens between each micro-frame.
Option B:	S (sender) cuts the preamble into a series of micro frames.
Option C:	S (sender) cuts the preamble into micro-frames, and listens between each micro-frame.
Option D:	Senders listen to the remainder of the preamble, which costs energy and Increases collision probability.

7.	_____ localization algorithm works according to the last known or estimated location by using velocity or acceleration.
Option A:	Dead reckoning
Option B:	Scene analysis
Option C:	Proximity
Option D:	Hybrid
8.	Link-Layer Handover process follows three steps: two modes of scanning:
Option A:	active and passive
Option B:	active and semi-passive
Option C:	semi-active and passive
Option D:	semi active and semi passive
9.	Oozie workflow jobs are directed _____ graphs of actions.
Option A:	Linear
Option B:	Elliptical
Option C:	Cyclic
Option D:	Acyclic
10.	Hadoop Ecosystem does not include --------------.
Option A:	Oozie
Option B:	Yarn
Option C:	Hive
Option D:	Zoo

Q2.		
A	**Solve any Two**	**5 marks each**
i.	Discuss the technical challenges in RFID.	
ii.	Sketch the Hadoop architecture and explain its different components.	
iii.	Explain 10 most emerging technologies in IoT	
B	**Solve any One**	**10 marks each**
i.	List the features of CoAP and explain the different messaging modes of CoAP.	
ii.	Draw the RFID based architecture for supply chain management application.	

Q3.		
A	**Solve any Two**	**5 marks each**
i.	Explain the architecture of MQTT protocol with its selection criteria.	
ii.	Explain different Identifiers in IOT.	
iii.	Explain the Types of Wireless Sensor Network?	
B	**Solve any One**	**10 marks each**
i.	What does NETCONF-YANG mean, explain the device managements of the same.	
ii.	Discuss the RFID enabled handoff management process in Localization and Mobility management.	

Q4.	
A	**Solve any Two** **5 marks each**
i.	List and explain the components of RFID
ii.	Illustrate how Energy-efficiency in MAC protocols is maintained.
iii.	Suggest the IoT Framework for Home Automation application.
B	**Solve any One** **10 marks each**
i.	Differentiate between the various conventional localization techniques. Explain any one detail.
ii.	Discuss the need of the Chef and Puppet tools with their benefits. List the industries using them.