

University of Mumbai

Examination 2022

Program: Information Technology

Examination: BE Semester VIII

Course Code: ITC802 and Course Name: **Internet of Everything**

Time: 2 hour 30 minutes

Max. Marks: 80

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 preambles 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.	