

## Sample Questions

Information Technology

**Subject Name:**Internet of Everything

**Semester:** VIII

### Multiple Choice Questions

<b>Q1.</b>	<b>Choose the correct option for following questions. All the Questions carry equal marks</b>
1.	Which RFID tag does not need an embedded power?
Option A:	Active
Option B:	Passive
Option C:	Semi-Passive
Option D:	Semi-Active
2.	The basic IoT Functions are identifying, sensing and _____.
Option A:	Addressing
Option B:	Communicating
Option C:	Routing
Option D:	Actuating
3.	Alkaline batteries have a _____ life as compared to Lithium batteries
Option A:	Longer
Option B:	Shorter
Option C:	Equal
Option D:	Resistant
4.	_____ act as primary devices to collect data from the environment.
Option A:	Machines
Option B:	Antenna
Option C:	Sensors
Option D:	Switch
5.	The frequency corresponding to the maximum voltage across the primary coil in RFID is known as the _____.
Option A:	Recurring Frequency
Option B:	Resulting Frequency
Option C:	Reserved Frequency
Option D:	Resonant Frequency
6.	In a Monostatic Antenna the Isolator has _____ Ports.
Option A:	1
Option B:	2

Option C:	3
Option D:	4
7.	In passive Tag Class 2 is _____
Option A:	Read Only
Option B:	Read/Write
Option C:	Read, Write once
Option D:	Write once
8.	The sensor nodes can communicate among themselves using _____.
Option A:	X-Rays
Option B:	Radio signals
Option C:	Microwaves
Option D:	Sound Waves
9.	In Mobile IP, the _____ stores the permanent information of the mobile users.
Option A:	HLR
Option B:	VLR
Option C:	SLR
Option D:	PLR
10.	Hadoop Ecosystem does not includes _____
Option A:	Oozie
Option B:	Yarn
Option C:	Hive
Option D:	Zoo
11.	_____ applications come under “Retail “ for IoT?
Option A:	Smart grids
Option B:	Smart roads
Option C:	Inventory management
Option D:	Renewable energy system
12.	What is the advantage of Dynamic Binary Tree Slotted ALOHA?
Option A:	Easy Frame Adjustment
Option B:	Memory less
Option C:	Improved Efficiency
Option D:	Fast slotting
13.	A good bar code reader can read _____
Option A:	Only one bar code at a time
Option B:	Two barcodes at once
Option C:	Many barcodes at once

Option D:	Many barcodes, at the same time, from a distance of several feet
14.	MQTT topics are
Option A:	Simple floating point
Option B:	Simple integer
Option C:	Simple symbol
Option D:	Simple string
15.	_____ 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
16.	Hadoop run on _____
Option A:	Mac
Option B:	Cross-platform
Option C:	Linux
Option D:	Linux + Windows
17.	ZigBee is based on the following standard
Option A:	IEEE802.15.1
Option B:	IEEE803.15.6
Option C:	IEEE802.15.4
Option D:	IEEE801.15.4
18.	The L2 handover latency is between
Option A:	68.74ms and 396.76 ms
Option B:	58.74ms and 390.76 ms
Option C:	55.74ms and 396.76 ms
Option D:	58.74ms and 396.76 ms
19.	The license of Hadoop distributed is under
Option A:	Commercial
Option B:	Sun microsystems
Option C:	Mozilla
Option D:	Apache
20.	Bluetooth 5.0 promises:
Option A:	4x Speed, 2x Range, 2x Data
Option B:	6x Speed, 3x Range, 3x Data
Option C:	2x Speed, 4x Range, 8x Data
Option D:	3x Speed, 4x Range, 8x Data

<b>21</b>	A pure ALOHA network transmits 200 bits frames on a shared channel of 200 kbps. What is the throughput if the system (all stations together) produces 500 frames per second?
Option A:	156 frames
Option B:	146 frames
Option C:	92 frames
Option D:	38 frames
<b>22</b>	Antenna's efficiency is given by the ratio of_____
Option A:	Effective aperture to physical aperture
Option B:	Physical aperture to effective aperture
Option C:	Signal Power to noise power
Option D:	Losses
<b>23</b>	In pure ALOHA, the vulnerable time is _____ the frame transmission time.
Option A:	the same as
Option B:	two times
Option C:	three times
Option D:	half times
<b>24</b>	Link budget consists of calculation of_____
Option A:	Useful signal power
Option B:	Interfering noise power
Option C:	Signal power to noise power
Option D:	Useful signal & Interfering noise power
<b>25</b>	If there are n devices in a mesh topology network then the total number of duplex links are
Option A:	$n+2$
Option B:	$n-2$

Option C:	$n(n-1)/2$
Option D:	$n(n+1)$
<b>26</b>	Which Underwater Wireless Sensor Network architecture combined inter cluster communication, intracluster communication, anchor-buoyant node communication with mobile nodes.
Option A:	1D architecture
Option B:	2D architecture
Option C:	3D architecture
Option D:	4D architecture
<b>27</b>	CoAP provides which of the following requirements?
Option A:	Multicast support and simplicity
Option B:	Low overhead and multicast support
Option C:	Simplicity and low overhead
Option D:	Multicast support, Low overhead and Simplicity
<b>28</b>	Publish command message is sent from _____
Option A:	Only publisher to broker
Option B:	Only broker to publisher
Option C:	Publisher to broker and broker to publisher
Option D:	Server to Client
<b>29</b>	What is the purpose of supply chain management?
Option A:	Increase the production level
Option B:	Manage and integrate supply and demand management
Option C:	Enhance the quality of a product and services
Option D:	Provide satisfaction to the customer
<b>30</b>	Antenna's efficiency is given by the ratio of _____
Option A:	Effective aperture to physical aperture

Option B:	Physical aperture to effective aperture
Option C:	Signal Power to noise power
Option D:	Losses

### Descriptive Questions

<b>Q2</b>	<b>10 marks each</b>
1	Illustrate the working of Schematic of RFID tag with a neat diagram
2	With a neat diagram briefly describe the Scene analysis and proximity method of localization technique.
3	Write short notes on Apache Storm
4	Illustrate how Energy-efficiency in MAC protocols is maintained. Highlight preamble sampling protocol.
5	Illustrate the working of RFID middleware architecture. Give its importance
6	Classify the tag classes with a neat table and explain the capabilities of each tag.
7	With a neat diagram, briefly highlight the RFID Middleware and its Components.
8	Categorize reader driven anti-collision algorithms with brief explanations of each category.
9	Compare the Apache Spark and Apache storm frameworks with neat diagrams and highlight the difference between the two frameworks
10	List the features of CoAP and explain the different messaging modes of CoAP.
11	Discuss in detail the design and working of Mobile IP (MIP) - IETF communication protocol - IEEE 802.11 - along with its issues.
12	Explain the need of MIP along with its working.
13	What do you mean by Resource in the REST framework? What are the tools used for creating RESTful web services?
14	Explain the working of Network layer handoff in MIP and discuss the working of passive and active scanning in the same.
15	Design an IOT based application for an air pollution monitoring system. Draw block diagram with the required sensors and the IOT platform. Also suggest the type of communication protocol with the justification.
16	List the features of CoAP and explain the different messaging modes of CoAP.
17	Discuss in detail the design and working of Mobile IP (MIP) - IETF communication protocol - IEEE 802.11 - along with its issues.
18	List the conventional-Measurement algorithms that can be used for localization of the mobile object. Discuss any 3 techniques in detail.
19	Explain 10 most emerging technologies in IoT
20	Describe in detail about the four common methods for measuring distance estimation technique with a diagram and its formula.
21	Explain the Types of Wireless Sensor Network?

22	Explain the working principle of UHF RFID System
23	Explain the impact of RFID Technology in SCM and Logistic Application.

<b>Q3</b>	<b>5 marks each</b>
1	List and explain the RFID applications?
2	Write short note on RFID Reader RFID Tag RFID Middleware
3	List and explain the components of RFID
4	Write Short note on a. Chef Case b. Case study on Puppet
5	List and explain all three different localization techniques with a neat diagram.
6	Describe the mobility and handover management systems in short.
7	What does NETCONF-YANG mean, explain the device managements of the same.
8	Explain the major components of IoT with suitable diagram in short
9	Explain Friis EM wave propagation equation in free space
10	Explain the Algorithm steps of Triangulation