DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE

Supplementary Winter Examination – 2024

Course: B.Tech   Branch :   Computer Engineering/Computer Science & Engineering

Semester : VI

Subject Code & Name: BTCOE604B_Y23 Internet of Things

Max Marks: 60   Date: 26/12/24   Duration: 3 Hr.

Instructions to the Students:
1. Each question carries 12 marks.
2. Question No. 1 will be compulsory and include objective-type questions.
3. Candidates are required to attempt any four questions from Question No. 2 to Question No. 6.
4. The level of question/expected answer as per OBE or the Course Outcome (CO) on which the question is based is mentioned in ( ) in front of the question.
5. Use of non-programmable scientific calculators is allowed.
6. Assume suitable data wherever necessary and mention it clearly.

					(Level/CO)	Marks
Q. 1	**Objective type questions. (Compulsory Question)**					**12**
1	The IoT started between the years _____				Remember	1
	a. 2008-2009	b. 2002-2003	c. 2004-2005	d. 2018-2019		
2	Self-driving car is now becoming a reality with well-known projects like _____ self-driving car.				Analysis	1
	a. Window's	b. Google's	c. Amazon	d. None of these		
3	IP, _____, and UDP bring connectivity to IoT networks.				Understand	1
	a. TCP	b. Internet	c. UDP	d. IP		
4	_____are fundamental building blocks of IoT networks				Remember	1
	a. IP	b. Sensors	c. IOT	d. a &b		
5	___is a wireless access technology for low-cost and low-data-rate devices				Understand	1
	a. IEEE 802.15.4	b. IEEE 802.2.1	c. IEEE 802.1.2	d. None of these		
6	IEEE 802.11 _____is certainly the most successfully deployed wireless technology.				Analysis	1
	a. Wi-Fi	b. LAN	c. MAN	d. WAN		
7	Routing Protocol for Low Power and Lossy Networks				Understand	1
	a. IPV4	b. ICMP	c. IPv6	d. UDP		
8	_____is one of the most common industrial protocols in the world				Analysis	1
	a. SCADA	b. Wi-Fi	c. 3G	d. 4G		
9	In _____learning, the machine is trained with input for which there is a known correct answer.				Understand	1
	a. supervised	b. unsupervised	c. training set	d. pixel		
10	Smart city IoT infrastructure is a _____architecture.				Remember	1
	a. four-layered	b. five-layered	c. three-layered	d. two-layered		

11	In order to promote _____ the government should employ more management.				Analysis	1
	a. eGovermnent related	b. Enterprise-based	c. Company based	d. Business oriented platform		
12	A _____ is thermally sensitive resistor that exhibits a large change in resistance.				Synthesis	1
	a. Thermistor	b. Thermocouple	c. LVDT	d.Pressure sensor		
Q. 2	**Solve the following.**					**12**
A)	What Is IOT? Explain Genesis of IOT.				Knowledge	**6**
B)	Explain IOT data management and compute stack.				Understand	**6**
Q.3	**Solve the following.**					**12**
A)	Explain how sensor and actuator interact with the physical world.				Understand	**6**
B)	Explain Communication Protocols for Wireless Sensor Networks.				Remember	**6**
Q. 4	**Solve Any Two of the following.**					**12**
A)	Explain Optimizing IP for IoT Using an Adaptation Layer.				Understand	**6**
B)	Comparison of an IoT Protocol Stack Utilizing 6LoWPAN and an IP Protocol Stack.				Analysis	**6**
C)	Explain CoAP Communications in IoT Infrastructures.				Remember	**6**
Q.5	**Solve Any Two of the following.**					**12**
A)	Explain Message Queuing Telemetry Transport (MQTT).				Understand	**6**
B)	Explain IoT Application Layer Protocols.				Remember	**6**
C)	Explain Massively Parallel Processing Databases.				Understand	**6**
Q. 6	**Solve Any Two of the following.**					**12**
A)	Explain Smart City Security Architecture with a neat diagram.				Understand	**6**
B)	Explain different categories of Raspberry operating system.				Remember	**6**
C)	Explain the Data types, operators and constants in Arduino programming.				Synthesis	**6**
	*** End ***					