

**University of Mumbai**  
**Examination First Half 2022**

**Program: MCA**

**Curriculum Scheme: MCA 2-year Course**

**Examination: M.C.A First Year Semester II**

**Course Code: MCAE242 and Course Name: Internet of Things**

**Time: 2 hours 30 mins**

**Max. Marks: 80**

Q1.	<b>Choose the correct option for following questions. All the Questions are compulsory and carry equal marks</b>	<b>2 Marks each</b>
1.	An M2M device in "ETSI architecture" connects to the Network Domain either directly or through an _____.	<b>2 Marks</b>
Option A:	M2M Area Network	
Option B:	M2M Router	
Option C:	M2M Gateway	
Option D:	M2M Switch	
2.	Which of the following is not the characteristics of IoT?	<b>2 Marks</b>
Option A:	No Unique Identity	
Option B:	Self-Configuring	
Option C:	Interoperable Communication Protocols	
Option D:	Dynamic & Self-Adapting	
3.	In IoT design methodology steps, Information Model specification focuses on which class of the domain model?	<b>2 Marks</b>
Option A:	Virtual Entity	
Option B:	Physical Entity	
Option C:	Services	
Option D:	Resource	
4.	The concept of using and adapting Web protocols to connect anything in the physical world and give it a presence on the World Wide Web is called _____.	<b>2 Marks</b>
Option A:	Internet of Things	
Option B:	Web of Things	
Option C:	Cloud of Things	
Option D:	Internet of Everything	
5.	Smart inventory management for retail uses which of the following?	<b>2 Marks</b>
Option A:	RFID tags	
Option B:	PIR Sensor	
Option C:	Ultrasonic sensor	
Option D:	LDR	
6.	The physical entity is considered in which sub-model of IoT reference model?	<b>2 Marks</b>
Option A:	IoT Communication Model	
Option B:	IoT Information Model	
Option C:	IoT Functional Model	
Option D:	IoT Domain Model	

7.	Modbus Protocol enables communication between approximately _____ devices connected to the same network.	<b>2 Marks</b>
Option A:	247	
Option B:	327	
Option C:	360	
Option D:	427	
8.	In which types of attack, the attacker has direct access to the IoT device or infrastructure?	<b>2 Marks</b>
Option A:	Software Attack	
Option B:	Chip Layer Attacks	
Option C:	Device Layer Attacks	
Option D:	Network Attack	
9.	Which of the following cloud computing services offers entire IT computing infrastructure, provisioned and managed over the internet.	<b>2 Marks</b>
Option A:	SAAS	
Option B:	PAAS	
Option C:	IAAS	
Option D:	NAAS	
10.	Which of the following IoT level has single node, data is stored and analyzed on cloud.	<b>2 Marks</b>
Option A:	Level-1 IoT System	
Option B:	Level-2 IoT System	
Option C:	Level-3 IoT System	
Option D:	Level-4 IoT System	

<b>Q. 2</b>	<b>Solve any Two Questions out of Three</b>	
A	Define IoT. State and explain various characteristics of IoT.	<b>10 marks</b>
B	Explain IoT Domain Model with the help of diagram.	<b>10 marks</b>
C	Explain need for IoT security.	<b>10 marks</b>

<b>Q. 3</b>	<b>Solve any Two Questions out of Three</b>	
A	Explain application of IoT in Smart City and Retail.	<b>10 marks</b>
B	Explain IoT system design methodology steps in detail?	<b>10 marks</b>
C	What are different State of Art Architectures and Reference Model? Explain Any two of them.	<b>10 marks</b>

<b>Q. 4</b>	<b>Solve any Two Questions out of Three</b>	
A	Illustrate the IoT level 1 and level 2 with diagram.	<b>10 marks</b>
B	Explain the Cloud of things architecture with suitable diagram.	<b>10 marks</b>
C	What are issues of IoT Standardization. Discuss SCADA Standardization Efforts.	<b>10 marks</b>