MODEL QUESTION PAPER
Internet of Things

Time: 3 hours   Maximum Marks: 75

PART A

I   Answer all questions in one word or one sentence.

(9x1=9 Marks)

1	Define IoT	M1.01	R
2	List any two challenges while building an IoT application.	M1.05	R
3	Name the protocol used to link all devices in IoT.	M2.01	R
4	What is Bluetooth Smart	M2.03	R
5	What is the importance of URI in networking.	M2.04	R
6	List any two advantages of fog computing.	M3.04	R
7	------ sensor is used to track location.	M4.01	R
8	List any two advantages using Python in IoT applications.	M4.04	R
9	What is the function of GPIO pins in Raspberry Pi.	M4.05	R

PART B

II   Answer any 8 questions from the following.

(8x3=24 Marks)

1	THINGS in IoT means HARDWARE + SOFTWARE + SERVICE. Justify the above statement with an example.	M1.02	U
2	Explain MQTT publish/subscribe model	M2.02	U
3	Explain the Connections topology in BLE.	M2.03	U

4	Illustrate the working of Li-Fi	M2.03	U
5	What is the difference between URI and URL.Give an example.	M2.04	U
6	List and define the different cloud service models.	M3.01	R
7	Explain any three challenges when IoT and cloud are coupled.	M3.02	U
8	How does fog computing work.	M3.04	U
9	List the syntax of different looping statements in Python.	M4.04	R
10	Give an example for declaring a user defined function in Python.	M4.04	U

PART C

III   Answer all the questions from the following.

(6x7=42 Marks)

1	Explain the classification of IoT based on complexity to build and operate?	M1.04	U
	OR		
2	Explain Layered architecture of IoT?	M1.02	U
3	Explain different IoT enabling technologies?	M1.03	U
	OR		
4	Explain the characteristics and applications of IoT?	M1.01 M1.05	U
5	Explain Constrained Application Protocol (CoAP)?	M2.02	U
	OR		
6	Explain IPV4 and classful addressing?	M2.04	U
7	Explain three different cloud deployment models	M3.01	U
	OR		
8	Outline the criteria for selecting a cloud service provider for	M3.03	U

	IoT applications.		
9	Explain the role of sensors and actuators in IoT. Give Examples	M4.01	U
	OR		
10	Explain the features of two commonly used embedded computing boards in IoT.	M4.02	U
11	Explain the working of any two applications built with IoT.	M4.06	U
	OR		
12	With the help of an example illustrate the steps to interface Raspberry PI with sensor?	M4.05	U

MODEL QUESTION PAPER

INTERNET OF THINGS

Time: 3 hours   Maximum Marks: 75

PART A

I.   Answer all the following questions in one
       word or sentence.

(9 x 1 = 9 Marks)

Module Outcome Cognitive level

1	Define the Internet of Things?	M 1.01	R
2	Which architecture is suitable for IoT networks?	M1.01	R
3	What is the purpose of IP addresses in IoT?	M 1.01	R
4	MQTT follows_____model	M2.02	R
5	What is the size of an IPv6 address in bits?	M2.04	R
6	Hybrid cloud deployment model is the integration of_____and_____deployment models	M3.01	R
7	What is the use of Service Level Agreements?	M 3.03	R
8	Which language is suitable to write program with arduino board	M4.02	R
9	Give an example for an actuator in an IoT application?	M 4.01	R

PART B

II.   Answer any Eight questions from
        the following

(8 x 3 = 24 Marks)

Module Outcome Cognitive level

1	Enumerate the IoT characteristics	M 1.01	U
2	Discuss the importance of communication protocols in IoT	M1.03	U
3	Explain the working principle of MQTT protocol	M2.02	U
4	Discuss the functioning of Li-Fi	M2.03	U
5	What are the layers of CoAP? Explain each layer	M2.02	R
6	Discuss three types of cloud services	M3.01	U
7	Write any three security aspects of cloud computing	M3.05	R
8	Discuss the role of sensors and actuators in details	M4.01	U

9	What are the major considerations required while selecting a sensor?	M4.01	R
10	With an example write about python Input and Output functions	M4.04	R

PART C

III. **Answer all questions from the following** **(6 x 7 = 42 Marks)**

Module Outcome Cognitive level

1. Explain seven layers of IOT stack with suitable examples OR	M 1.02	U
2. Discuss the classification of IoT applications	M 1.05	U
3. Explain different CoAP Protocol messages	M 2.02	U
OR		
4. With a neat diagram explain IPV6 packet format	M 2.04	U
5. Enumerate the challenges in building IoT application	M 1.05	R

OR		
6. What are the BLE stack components? Explain each component	M 2.03	R
7. Describe different cloud deployment models with merits and demerits	M 3.01	U
OR		
8. Describe fog computing model architecture with advantages	M3.04	U
9. How to interface LDR with Raspberry PI	M4.05	R
OR		
10. How to build smart perishable tracking /smart transportation application using IoT?	M 4.06	R
11. With examples describe different control structures of python	M4.04	U
OR		

	M4.04	U
12. Discuss different python data types with example		