

Reg.No.:



VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN
[AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]
Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

Question Paper Code: 60004

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025

Seventh Semester

Information Technology

U19IT725 – BUILDING OF INTERNET OF THINGS

(Regulation 2019)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

PART – A

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Describe Internet of Things.	2	K1	CO1
2.	List two challenges in designing an Embedded System.	2	K2	CO1
3.	Define a Software Defined Networks	2	K1	CO2
4.	What is YANG tool? And state its use.	2	K1	CO2
5.	What is the use of GPIO pins?	2	K2	CO3
6.	Name two interfaces used in IoT.	2	K2	CO3
7.	Identify IEEE 802.11ah along with its application.	2	K1	CO4
8.	Outline SCADA and its application.	2	K1	CO4
9.	Describe a smart city.	2	K2	CO5
10.	Explain a cloud service for IoT.	2	K2	CO5

PART – B

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Discuss the physical design and logical design of Internet of Things (IoT).	13	K2	CO1

		(OR)			
	b)	Explain the functional blocks of IoT and various communication models and APIs.	13	K2	CO1
12.	a)	i. Discuss and differentiate between IoT and M2M.	6	K2	CO2
		ii. Discuss and differentiate between Software Defined Networks and Network Function Virtualization.	7		
		(OR)			
	b)	Explain IoT System Management with YANG-NETCONF.	13	K2	CO2
13.	a)	Explain the architecture of Raspberry Pi and discuss IoT deployment on it.	13	K2	CO3
		(OR)			
	b)	Discuss the architecture of Arduino and explain its communication.	13	K2	CO3
14.	a)	Write short notes on and compare the working of MQTT and CoAP protocols used in IoT.	13	K2	CO4
		(OR)			
	b)	Compare and differentiate between IPv4 and IPv6 along with its advantages and limitations.	13	K2	CO4
15.	a)	Discuss the design and implementation of IoT solution for environment monitoring and surveillance.	13	K3	CO5
		(OR)			
	b)	Discuss the design and implementation of IoT solution for health fitness monitoring.	13	K2	CO5

PART – C

(1 x 15 = 15 Marks)

Q.No.	Questions	Marks	KL	CO
16.	a) Describe cloud and explain the different cloud platforms and ways to connect to it.	15	K3	CO5
				(OR)
	b) Discuss programming the serial, SPI and I2C interfaces using C programming.	15	K3	CO3