Sanjay Ghodawat University, Kolhapur 2018-19

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017 EXM/P/09/01

Year and Program:2019-20 **School of Technology** **Department of Electronics, T.Y B.Tech**

Course Code: ECE321 **Course Title: Introduction to Internet of Things-I** **Semester – V**

Day and Date: 11th Jan 2020 SATURDAY **End Semester Examination (ESE)** **Time:** 10.30 AM TO 1.30 PM **Max Marks: 100**

Instructions:
1) All questions are compulsory.
2) Assume suitable data wherever necessary.
3) Figures to the right indicate full marks.

		Marks	Bloom's Level	CO
Q.1	**Solve the following**			
a)	With the help of neat diagram, explain the simplified IoT architecture.	08	L_2	CO1
	OR			
a)	With the help of neat diagram explain the oneM2M IoT architecture.	08	L_2	CO1
b)	Compare M2M with IoT	07	L_4	CO2
	OR			
b)	With the help of neat diagram explain the Services layer of oneM2M architecture.	07	L_2	CO2
Q.2	**Solve the following**			
a)	Write down the syntax for declaration of following types of variables a) Boolean b) array c) string	08	L_2	CO3
	OR			
a)	Write a program using if-else statement for two leds connected at 2 ports of Arduino Uno 3, Whenever the counter count becomes odd, LED1 connected to port 13 must switch 'ON'& LED2 remains in OFF state, when counter count becomes even , LED2 connected to port 14 must switch "ON" while LED1 must go into OFF state	08	L_2	CO3
b)	Illustrate the reasons behind using Python language in IoT development?	07	L_3	CO4
	OR			
b)	Write an Arduino program to display table of Squares.	07	L_3	CO4

1/2

ESE

Q.3	**Solve any Two**				
	a)	Draw the layers of IoTWF. Explain the Layer 2 in brief.	08	L_2	CO1
	b)	Explain ETSI high-level architecture for applications and services in Internet of ATM Machines.	08	L_2	CO2
	c)	With the help of example, explain the working of for loop.	08	L_2	CO3
	d)	With the help of example, explain 'try & except' control statements in python.	08	L_2	CO4
Q.4	**Solve any Two**				
	a)	What do you understand by SANET? Enlist the advantages & disadvantages of SANET's?	09	L_3	CO5
	b)	With the help of neat diagram explain the sensor node architecture? Explain in brief the processing unit & communication unit.	09	L_3	CO5
	c)	Define sensor? Summarize the description of sensors used for measurement of following physical quantity along with examples. i. Occupancy & motion ii. Temperature iii. Force	09	L_4	CO5
Q.5	**Solve any Two**				
	a)	What are the different applications of Smart Traffic control architecture?	09	L_3	CO6
	b)	Outline the Security threats & vulnerabilities at IoT end node?	09	L_4	CO6
	c)	With the help of neat diagram explain the Smart lighting architecture for Smart cities?	09	L_3	CO6
Q.6	**Solve any Three**				
	a)	What do you understand by actuator? Give the classification of actuators on the basis of energy type?	06	L_2	CO5
	b)	With the help of neat diagram explain the different components used in Smart object?	06	L_2	CO5
	c)	What are the Security threats & vulnerabilities at IoT network layer?	06	L_2	CO6
	d)	Explain in details Cross-Layer threats?	06	L_2	CO6

2/2

ESE