SGU	**Sanjay Ghodawat University, Kolhapur** Established under section 2(f) of UGC Act 1956 Sanjay Ghodawat University Act XL of 2017 of Govt. of Maharashtra	2020-21 EXM/P/09/01

Year and Program:2020-21	**School of Technology**	**Department of Electronics Engg.**
Course Code: ECE321	**Course Title: Internet of Things-I**	**Semester : V**
Day and Date: Saturday 27th Feb. 2021	**End Semester Exam**	**Time:** **Max Marks: 50**

Instructions: 1. Assume suitable data wherever necessary
2. Figures to the right indicate full marks.

		Marks	CO's (Blooms level)
Q.1	**Attempt any two**		
a)	With the help of neat diagram, explain the simplified IoT architecture.	08	CO1(L1)
b)	What are the drivers behind developing new architecture for IoT?	08	CO1(L2)
c)	What are the necessary modifications required in OSI Model if it has to be used for IoT/M2M Systems	08	CO2(L2)
Q.2	**Attempt any two**		
a)	With the help of neat diagram explain the pin description of MKR 1000 WiFi board.	08	CO3(L2)
b)	What do you understand by embedded systems? Briefly explain different components of Embedded systems.	08	CO3(L2)
c)	What are the sensors used for IoT? Give in details, classification of sensors on the basis of application.	08	CO4(L2)
Q.3	**Attempt any two**		
a)	With the help of neat diagram explain the construction and working of MQ3 sensor. WAP for interfacing MQ3 to Arduino Uno.	09	CO5(L2)
b)	What are the security requirements at Sensing layer & at IoT end node?	09	CO6(L2)
c)	With the help of neat diagram explain the working of LMxx sensor. WAP for interfacing LM35 to Arduino Uno.	09	CO5(L2)