

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII (NEW) EXAMINATION – WINTER 2021****Subject Code:3174028****Date:27/12/2021****Subject Name:ICT for Infrastructure Engineering****Time:10:30 AM TO 01:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Simple and non-programmable scientific calculators are allowed.

		MARKS
Q.1	(a) Differentiate between LAN and WAN.	03
	(b) What are the similarities and differences between TCP/IP model and OSI model?	04
	(c) What is network topology? List out the different network topologies. Explain any two of them.	07
Q.2	(a) What is GPS System?	03
	(b) Explain the trilateration concept in the GPS.	04
	(c) Write short note on GPS augmentation and write down applications of GPS in at least four different areas.	07
OR		
Q.3	(c) Explain the MQTT protocol in IoT with example.	03
	(a) Discuss the issues in wireless sensor network.	04
	(b) What are the types of wireless sensor network? Explain any two types in detail.	07
	(c) What is IP address? Explain all IP address classes.	07
OR		
Q.3	(a) What is subnet mask and subnet address?	03
	(b) What are the challenges in IOT implementation? Explain in brief.	04
	(c) Explain the components in the RFID system. Give the classification of RFID tags.	07
Q.4	(a) What are the characteristics of IoT system?	03
	(b) What are the components of IOT system? Brief about all.	04
	(c) Explain the IOT stack in detail.	07
OR		
Q.4	(a) For what purposes we can use the different smart surveillance systems?	03
	(b) What is the importance of proxy and firewall in the computer network?	04
	(c) How does RFID system work? What are the RFID problems and concerns?	07
Q.5	(a) Explain with examples how does a smart home work?	03
	(b) What do you mean by smart mobility? Which services are included in smart mobility?	04
	(c) What is sensor? Give the classification of sensor.	07
OR		
Q.5	(a) Discuss level sensor in brief.	03
	(b) How can we use IOT in the Aadhaar?	04
	(c) Compare virtual reality and augment reality. Discuss about the hardware used in both technologies? Write application of both technologies.	07
