

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER- VI (NEW) EXAMINATION – WINTER 2021

Subject Code:3160617

Date:04/12/2021

Subject Name:Construction Equipment and Automation

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.**

Q.1 (a) Discuss the contribution of construction equipments in construction industry. 03

(b) Classify the construction equipments. 04

(c) Discuss in brief the factors affecting the selection of construction equipments. 07

Q.2 (a) Write the importance of construction equipments in construction industry. 03

(b) What are the function of a tractors what are the various type of tractor. 04

(c) Which are the canal Hydrulic properties for automation? Explain in detail. 07

OR

(c) Explain in detail how automation is working in cocrete technology? 07

Q.3 (a) What is building automation system. 03

(b) What is SCADA system? 04

(c) What are the advantages and disadvantages of Automation? 07

OR

Q.3 (a) How are Robots used in Construction? 03

(b) What is basics of Robotics? 04

(c) Explain in detail the uses of robots in construction industry. 07

Q.4 (a) Which sensor is used for monitoring the structural health of building and bridges? 03

(b) How 3d –printing Robot is working? 04

(c) How does a drone survey work? 07

OR

- Q.4** (a) What is drone mapping? **03**
(b) How Robotics could change the future of construction? **04**
(c) What is the full form of DRONE? What are drones useful for? **07**
- Q.5** (a) Write about the obstacles in construction Automation. **03**
(b) What is concept of Virtual reality? **04**
(c) What are the uses and benefits of Virtual reality technologies? **07**

OR

- Q.5** (a) What is robotic demolition in construction? **03**
(b) Write about applications of Automated construction and robotics. **04**
(c) Write shortnote on Building Information Modelling. **07**
