

GUJARAT TECHNOLOGICAL UNIVERSITY**ME – SEMESTER – I (New)– EXAMINATION – WINTER-2019****Subject Code: 3711415****Date: 06-01-2020****Subject Name: Sustainable Construction Practices****Time: 02:30 PM TO 05:00 PM****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain the evolution theory of energy efficient buildings. **07**
 (b) How you can use on site resources to make construction sustainable? Support your answer with proper examples. **07**
- Q.2** (a) Write short note on Sensing Technology and its application. **07**
 (b) What are the factors affecting to sustainable planning while fulfil the concept of Aesthetic Needs, Balancing Energy and natural elements? **07**
- OR**
- (b) Enlist and explain types of sensor and its use in building projects. **07**
- Q.3** (a) Explain the concept of Straw-Bale construction. **07**
 (b) Enlist and explain the types of excavators. **07**
- OR**
- Q.3** (a) Discuss the various factors that can affect the productivity of earthmovers. **07**
 (b) Enlist Equipment for construction of a typical highly mechanized AIRPORT project. Also write the construction task at which it can be used **07**
- Q.4** (a) Write short note on: Plant for the manufacturing of concrete blocks **07**
 (b) Differentiate between tools, instruments and equipment. Explain each of two with its application. **07**
- OR**
- Q.4** (a) Write short note on: Wall panel & Roofing channel making machine. **07**
 (b) What are the various advantage of Precast Construction Technology? **07**
- Q.5** (a) Enlist various Construction Techniques for foundation and explain any method in detail with figure. **07**
 (b) Explain Following: glass panels, facades and earth bag construction. **07**
- OR**
- Q.5** (a) Explain: convertible space concept with suitable examples. **07**
 (b) Give various lapping methods of construction. **07**
