

GUJARAT TECHNOLOGICAL UNIVERSITY
BACHELOR OF ENGINEERING – SEMESTER 4 – EXAMINATION – SUMMER 2026

Subject Code: BE04006031

Date: 16/06/2026

Subject Name: Building and Town Planning

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) What factors should be taken into account while planning a civic center in a town? **03**
 - (b) What is BIM? Explain the advantages of BIM in construction. **04**
 - (c) Draw the ground floor plan of a two-storied tenement house on a 10 m × 15 m plot as per building byelaws, assuming front road access, adjoining plots on three sides, suitable north direction, and other necessary data. **07**
- Q.2**
- (a) Why are satellite towns developed, and what purposes do they serve? **03**
 - (b) Explain the concept of perspective drawing and discuss its importance. **04**
 - (c) Draw front elevation for the two-storied tenement house drawn in Q.1(c). Assume other necessary site data. **07**
- OR
- Q.2**
- (c) Draw furniture plan, and drainage plan of the ground floor plan of a two-storied tenement house drawn in Q.1(c). Assume other necessary site data. **07**
- Q.3**
- (a) What are the advantages of obtaining plan approval and permission through ODPS? **03**
 - (b) List out the stakeholders involved in the building planning and approval process, and describe their role. **04**
 - (c) Give a detailed overview of URDPFI Guidelines. **07**
- OR
- Q.3**
- (a) Explain the key functions of RERA. **03**
 - (b) Define the term building byelaws and state their importance. **04**
 - (c) Which types of surveys are conducted for preparing a town planning proposal? Explain each in brief. **07**
- Q.4**
- (a) Define the terms (1) Control Line, (2) Set back, and (3) Plinth Area. **03**
 - (b) Discuss any four types of building according to their functions. **04**
 - (c) Explain the planning considerations for earthquake-resistant buildings with sketches. **07**
- OR
- Q.4**
- (a) Discuss a passive design strategy to make the building climate-responsive. **03**
 - (b) What is the role of ergonomics in building planning? **04**
 - (c) Discuss the site selection and location criteria for a residential building. **07**

- Q.5** (a) What is the basic difference between a bubble diagram and a line diagram? **03**
(b) Explain the concept of aspect as used in building planning. **04**
(c) Discuss in detail the importance of zoning, landscaping, and open spaces in town planning. **07**

OR

- Q.5** (a) Write a brief note on prevention of slums. **03**
(b) Explain how regional planning influences the planning and development of a town. **04**
(c) Describe the principles of architectural composition and their application in building design. **07**
