# GUJARAT TECHNOLOGICAL UNIVERSITY
## BE - SEMESTER–III(NEW) EXAMINATION – SUMMER 2023

**Subject Code:3130609**                                      **Date:28-07-2023**
**Subject Name:Building and Town Planning**
**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.**
4. **Simple and non-programmable scientific calculators are allowed.**

|      |     |                                                                                                                                                                         | **Marks** |
|------|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| Q.1  | (a) | Explain necessity of National Building Code (NBC).                                                                                                                       | 03        |
|      | (b) | Explain Following terms: (1) FAR (2) Layout plan (3) Height of building (4) Set back                                                                                     | 04        |
|      | (c) | Draw ground floor plan and first floor plan for two stories residential building on plot of 350 m² area for a family of 6 persons. Use principle of building planning and building bye laws. Assume north direction, front road and other necessary data. | 07        |
|      |     |                                                                                                                                                                         |           |
| Q.2  | (a) | Write a short note on BIM.                                                                                                                                               | 03        |
|      | (b) | Define Building bye laws and also describe application of building bye laws.                                                                                             | 04        |
|      | (c) | Explain in detail Principle of planning.                                                                                                                                 | 07        |
|      |     | **OR**                                                                                                                                                                  |           |
|      | (c) | Write short note on ODPS.                                                                                                                                                | 07        |
| Q.3  | (a) | Define following: (1) Picture plane (2) Vanishing Point (3) Center of vision.                                                                                            | 03        |
|      | (b) | Explain principles of architectural composition.                                                                                                                        | 04        |
|      | (c) | Draw line diagram of Bank (Public Building). Take size of units according to the general requirement of public building as per bye laws.                                 | 07        |
|      |     | **OR**                                                                                                                                                                  |           |
| Q.3  | (a) | Explain perspective view and its importance.                                                                                                                             | 03        |
|      | (b) | How building is made Earthquake resistant using construction technique?                                                                                                  | 04        |
|      | (c) | Discuss software application in building planning and drawing for 2D model.                                                                                              | 07        |
| Q.4  | (a) | Differentiate one point and two point perspective view.                                                                                                                  | 03        |
|      | (b) | Enlist the general principle in construction of earthquake resistance building and explain any one.                                                                      | 04        |
|      | (c) | Assuming suitable position and height of the observer and other essential data to draw a perspective view of a single room of 6m X 5m with the following details:        | 07        |

(1) Plinth height= 1.0 m
(2) Wall thickness= 0.3m
(3) Window sill level= 0.9m
(4) Long wall window side= 2.2m X 1.2m
(5) Door= 1.2m X 2.1m
(6) Clear floor height= 3.0m
Assume other necessary data if required.

**OR**

|      |     |                                                                                          |    |
|------|-----|------------------------------------------------------------------------------------------|----|
| Q.4  | (a) | Write down the necessity of civic survey.                                                | 03 |
|      | (b) | Explain principle of neighborhood planning.                                              | 04 |
|      | (c) | Discuss growth of town according to origin and direction.                                | 07 |
|      |     |                                                                                          |    |
| Q.5  | (a) | Define Zoning and enlist principle of zoning.                                            | 03 |
|      | (b) | Write short note on British period till 1947                                             | 04 |
|      | (c) | Discuss in detail characteristics of smart city.                                         | 07 |
|      |     | **OR**                                                                                   |    |

**Q.5** **(a)** Explain CBD and its characteristics. **03**

**(b)** Explain classification of land use. **04**

**(c)** Explain the causes of slum; Describe the methods of slum clearance. **07**