

**GUJARAT TECHNOLOGICAL UNIVERSITY****B.E. Sem-III Regular / Remedial Examination December 2010****Subject code: 130603****Subject Name: Building and Town Planning****Date: 15 /12 /2010****Time: 10.30 am – 01.30 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. Q.1 and Q.2 (a) should entirely be done on drawing sheet.

- Q.1 (a)** Your client has purchased plot no.20. Admeasuring 25.0 m X 20.0 m. with its shorter side abutting to 12.0 m. wide society road. He is interested in constructing his house. At present he wants to construct only ground floor and have ornamental internal stairs which shall open in drawing room. As such he doesn't intend to construct anything except staircase cabin on first floor. **07**

Requirements are specified as follows:

Drawing Room., Consulting room with attached toilet and separate access from outside and also from inside, Kitchen cum dinning room with attached store and access to outside, Two bed Rooms with attached toilet, Guest bed room, Common toilet ,Verandah, internal staircase and wide circulation paths.

Plot details are as follows:

- On due north side = 12.0 m. wide road
- On due south side = Subplot no. 10
- On due east side = Sub plot no. 22
- On due west side = Sub plot no. 21
- Permissible built-up area = 40 %
- FSI permissible = 1.1

Perform design steps like area calculations, area allocations, trial grouping , room size determination, provide doors, windows, ventilators, other openings etc., Design Stair case and Prepare line plan showing all this details and prepare schedule of opening

- (b)** Prepare detailed plan with all relevant details based upon line plan prepared in Q.1(a) **07**
- Q.2 (a)** Prepare detailed sectional elevation (by selecting section plane passing through stairs) with all relevant details based upon plan prepared in Q.1(b) **07**
- (b)** Explain Objectives, Scope and Applicability of Building Bye Laws and Development control regulations. **07**

**OR**

- (b)** Briefly define and/or explain following: **07**
1. Control line and building line
  2. Built up area
  3. Floor space index
  4. Consolidated Open Plot

- Q.3 (a)** Differentiate between Principles of Planning and Principles of architecture (composition) with reference to their impact on final design of structure. **04**
- (b)** Briefly outline the guidelines for design of secondary school. **05**
- (c)** Briefly explain the guidelines for design of non engineered earthquake resistant brick masonry structures. **05**
- OR**
- Q.3 (a)** Explain purpose, period of generation of submission drawing, working drawing and record drawing. Also enlist various working drawings that may be needed for construction of multiplex project. **04**
- (b)** Enlist various types of pictorial drawings. Explain typical characteristics and purpose of various types of perspective drawings. **05**
- (c)** Briefly explain behavior of structures during earthquake and possible mode and pattern of failure. **05**
- Q.4 (a)** Define term 'Town planning'. Explain aims and objectives of town planning. **07**
- (b)** Write descriptive and detailed note on : Origin and growth of towns **07**
- OR**
- Q.4** Write explanatory notes on followings: **14**
1. Ribbon development.
  2. Satellite towns.
  3. Urban roads: Vital element of town planning.
  4. Indus valley civilization.
- Q.5 (a)** Why are surveys carried out before town planning? What are the methods adopted for collection of data in surveys? **04**
- (b)** Enlists all elements of town planning and discuss 'zoning' in details. **05**
- (c)** Explain need of planning of town centers in town planning. State briefly about 'business centers' & their sub groups. **05**
- OR**
- Q.5 (a)** Differentiate between followings: **04**
1. Functional survey & territorial survey,
  2. Social survey & vital survey.
- (b)** State objectives and requirements of 'Master plan' for developments. Name different types of data to be collected to prepare the master plan. **05**
- (c)** Write brief note on followings(Any two): **05**
1. Neighborhood planning.
  2. Slums: Clearance & improvements.
  3. Public utility services.

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