* U G - 7 6 0 1 *

UG-7601

B. Arch. IV (Sem. VIII) Examination

May/June – 2012

Hi-Tech Structure

Time : **3** Hours] [Total Marks : **100**

Instructions :

(1)

નીચે દર્શાવેલ ☛ નિશાનીવાળી વિગતો ઉત્તરવહી પર અવશ્ય લખવી.
Fillup strictly the details of ☛ signs on your answer book.

Name of the Examination :

☛ **B. Arch. IV (Sem. VIII)**

Name of the Subject :

☛ **Hi-Tech Structure**

☛ Subject Code No. : **7 6 0 1** ☛ Section No. (1, 2,.....) : **Nil**

Seat No. :

Student's Signature

(2) Assume suitable data & specifically mention it.
(3) Figures to the right indicate full marks.
(4) Draw detailed drawings to support your answer.

1 Classify lateral load resisting system. Explain load transfer in each case with its advantages & disadvantages. **20**

Attempt any two questions out of Q-2, Q-3 & Q-4.

2 Explain any one existing tall structure in terms of following details. Lateral load resisting system, gravity load transfer, material, connections, foundation details, any other hi-tech systems or specific method for load transfer along with structural plan & sectional elevations. **15**

3 Explain load transfer in. **15**

- Plate
- Grids
- Folded plates
- Shell

4 Explian following. **15**

(1) What kind of lateral load resisting system should be used in tall structure in earthquake prone zone ? Why ?

(2) How wind is important parameter while designing Tensile structure ? What are the methods to resist wind in tensile structure ?

5 Explain any one existing Tensile structure in terms of following details. Form, structural elements, load transfer, material used, cladding used, various connections, foundation details etc. with proper sectional plan, elevation & sections. **20**

Attempt any two questions out of Q-6, Q-7 & Q-8

6 Explain any one existing structure which makes the use of either base isolation system **15**

OR

Dampers to resist the effect of earthquake.

7 What is Hi-tech structure ? Explain any one hi-tech structure other than tall & tensile which you think as a hi-tech. Give your justification for the same. Explain your structure with all the details like form, load transfer, material, connection, technology, foundation etc. **15**

8 Explain following. **15**

- Rotational surface.
- Double curvature surface.
- Translational surface.
- Seismic joint.
- Stiff & flexible system in earthquake zone.