



**KD-6043**  
**B. Arch. IV (Sem. VII) Examination**  
**December - 2012**  
**Advanced Structural Design & Systems**  
*(New Course)*

Time : 3 Hours]

[Total Marks : 100

**Instructions :**

(1)

<p>नीचे दशांशवेक निशानीवाणी विगतो उत्तरवही पर अवश्य लपखी. Fillup strictly the details of signs on your answer book.</p> <p>Name of the Examination : B. ARCH. IV (SEM. VII)</p> <p>Name of the Subject : Advanced Structural Design &amp; Systems (New Course)</p> <p>Subject Code No. : 6 0 4 3 Section No. (1, 2,.....) : Nil</p>	<p>Seat No. : □ □ □ □ □ □</p> <p style="text-align: center;">Student's Signature</p>
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- (2) Assume suitable data and specifically mention it.  
(3) Figures to the right indicate full marks.  
(4) Draw sketches to explain your answer.

- 1 Explain following terms in brief with sketches : 06  
Three way double layer grid, Double cable structure, Core & outrigger
- 2 Explain any one Existing tall structure in terms of following details. Lateral load resisting system, gravity load transfer system , material, connections, foundation details, any other hi-tech or advanced systems used for load transfer ,along with structural plans & sectional elevations & dimensions. 10
- 3 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. 10
- 4 Explain Any one existing structure having space frame. Explain in terms of form , size, support system , types of grids, layers & connections used, structural plan, elevations & sections with dimensions. 09

**5 Attempt any three :**

**15**

- (a) Explain Tube system in tall structure .
  - (b) Explain Base isolation system in tall building.
  - (c) Classify tensile structure in brief & explain any one system in detail with reference to form , load transfer , & stability against wind
  - (d) Classify single layer space frame with reference to form, span, supports, with proper sketches. & its advantages & disadvantages.
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