



UG-7007

B. Arch. III (Sem. VI) (ATKT) Examination
May/June - 2012

Building Material & Construction (AR - 603)
(Syllabus - B)

Time : 3 Hours]

[Total Marks : 100

Instructions :

(1)

नीचे दशांशविक निशानीवाणी विगतो उत्तरवही पर अवश्य कभवी. Fillup strictly the details of signs on your answer book.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. Arch. III (Sem. VI) (ATKT)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="Building Material & Construction (AR - 603)"/>	<input type="text"/>
Subject Code No. : <input type="text" value="7"/> <input type="text" value="0"/> <input type="text" value="0"/> <input type="text" value="7"/>	Section No. (1, 2,.....) : <input type="text" value="Nil"/>
Student's Signature	

- (2) Figures to the right indicate full marks.
(3) Support your answers with neat sketches.

- 1 (a) Answer in one line. 10
- (1) What is the difference between intensity and magnitude of an earthquake ?
 - (2) What kind of geometric configuration and mass distribution is preferred in designing for EQ zones ?
 - (3) How can you ensure 'box-action' for the walls in a load bearing structure in seismic zone (two points) ?
 - (4) What are the main failure types in a beam and which one is preferable ?
 - (5) How can you isolate the building for better EQ resistance ?
- (b) Fill up : 10
- (1) A beam or slab supported at one end or edge only and projecting out from its support is known as a _____.
 - (2) For an optimized performance of synergetic structures like metal domes the joints should be _____.

- (3) No fines concrete do not have _____ as their ingredient.
- (4) Sub structure comprises of _____.
- (5) Fly ash is the byproduct of _____ industry.
- (6) _____ is a thin sheet like structural element either flat or singly curved or doubly curved and acting wholly in tension.
- (7) An arch is a type of _____ catenary.
- (8) The 3-d extrapolation of inverted catenary is _____ type of structures.
- (9) A shell having slopes in one direction are termed as _____.
- (10) For large spans in temporary exhibitions _____ are good option.

- 2 (a) Discuss the role of beam in RC framed structures along with strategies for better earthquake resistance. **10**
- (b) Discuss the material aspect of green building design, with some suitable design. **10**

OR

- (b) Discuss various agro waste based materials with their application potential. **10**
- 3 (a) Suggest appropriate building technology and material choice for cost effective and eco friendly shelters for urban areas in the southern geoclimatic zone of India. **10**
- (b) Out of your studio project, select any one large column free space that you have designed and sketch out the plant section and details showing the material and joinery. **10**

- 4 (a) 'Steel is a promising material for future constuction'. Justify with the merits of steel construction. **10**
- (b) Explain different types of roofs as component of the building system with sketches. **10**

OR

- (b) What is meant by surface structures or surface materials ? What are the advantages of these surface materials in comparison to conventional materials ? **10**

- 5 (a) What do you understand from resistant structures ? 10
Explain with the help of folded plates.
- (b) Attempt any two. 10
- (1) Ribbed and cellular pattern as used in roofs/slab.
 - (2) Bamboo for walling and roofing.
 - (3) Mud construction methods. (any two)
 - (4) Joineries and fastening methods for framed structures.
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