



SF-7003-A

B. Arch. III (Sem. VI) Examination

May / June – 2011

AR-606 : BS-3

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.	Seat No. :
Name of the Examination :	<input type="text"/>
<input type="text" value="B. Arch. 3 (Sem. 6)"/>	<input type="text"/>
Name of the Subject :	<input type="text"/>
<input type="text" value="AR-606 : BS-3"/>	<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="3"/>	<input type="text"/>
Section No. (1, 2,.....) : <input type="text" value="Nil"/>	<input type="text"/>
	Student's Signature

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

- 1 (a) Answer in **one** line : 10
- What are the three basic arms of a fire triangle ?
 - What is the basic working principle of smoke detectors ?
 - What are the building services head which come under BAS ?
 - What does HVAC stands for ?
 - How much fire resistance is required for the fire escape stairs ?
 - What is the size of a fire engine ?
 - What is the maximum escape route needed for institutional building (distance) ?
 - What are moving walks ?
 - What is the minimum size of fire escape elevator ?
 - What does class-A types of fires mean ?
- (b) Discuss the vertical transportation strategy along with 10
benefits of shuttle lifts and double Decker lifts, as applicable for sky scrapers kind of buildings.
- 2 Long Answer Type (attempt any **four**) : 40
- With an appropriate sketch discuss the classification for various levels of defense for a building of a high level security.

- (ii) What do you understand by crime prevention through environmental design ? Discuss the features of territorial, surveillance, and access control as CPTED techniques.
 - (iii) Discuss with the help of sketches the various configuration of escalator arrangement.
 - (iv) Discuss passive controls for fire safety with details on the concept of compartmentation.
 - (v) With the help of a schematic chart show the different domains of buildings as maintained by Centrally Controlled Monitoring System (CCMS).
- 3** (a) How does fire spread within a building ? List the methods to assess the severity of fire. **10**
- (b) What are the safety and security concerns in a multi storeyed residential building and security planning strategies for the same. **10**
- OR**
- (b) What are the safety and security concerns in railway stations and security planning strategies for the same. **10**
- 4** Attempt any **four** : **20**
- (i) Car Parking bye laws for fire safety
 - (ii) Staircase design byelaws for fire safety
 - (iii) Barrier control methods for security design
 - (iv) Sprinkler system for fire safety
 - (v) Explain class A, B, C, D type of fires with possible suppressants.
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