

Seat No. : _____

NJ-117

November-2013

Fourth Year B. Arch Sem-VII

Interim Syllabus (Regular)

Advance Construction (AR– 702)

Time : 3 Hours]

[Max. Marks : 100

- Instructions :** (1) Attempt **all** questions.
(2) Figures on the right indicate full marks.
(3) Draw neat sketches wherever required.
(4) Assume suitable additional data if required.

1. What is a Disaster ? What are types of disaster that can affect human lives and property and the measures that can be taken to save them ? **25**
2. Make a compare matrix grading 1-10 value with short remarks of the disasters based on Frequency, Duration, Damage : Earthquake, Floods, Cyclone, Landslide, Atomic radiation, War, Fire, Air pollution, Water pollution, Soil Erosion, Avalanches, Volcanic eruption, Tsunami. **15**

OR

Write about the recent disaster of Cyclone Phailin that hit Odisha east coast of India.

3. Write in short : (Any **two**). **10**
 - (1) What are structural and non structural cracks ?
 - (2) What is the role of fly ash and how it affects the workability of concrete ?
 - (3) Explain with example, retrofitting using short-creating.
4. Write in brief : (Any **two**) **20**
 - (a) Give the names of different types of accelerators and retarders.
 - (b) Give at least 5 names of corrosion inhibitors. And how corrosion of reinforcement can be prevented ?
 - (c) Silica fume and its role in concrete.

5. Explain through neat sketches : (Any **five**) **15**
- (a) Scum gutter/overflow detail
 - (b) Repair of RCC column using Jacketing
 - (c) Underwater pool lighting
 - (d) Section of Shear RCC wall.
 - (e) Water purification plant.
 - (f) Diagram of Working of Swimming Pool.
6. Define : (Any **three**) **15**
- (a) Repairing, restoring, rehabilitation
 - (b) Segregation, bleeding and laitance
 - (c) Shear cracks, Cracks due to settlement
 - (d) Frequency and Predictability of Disaster
 - (e) Construction Chemicals.
 - (f) Filler materials for repairs.
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