

(3 HOURS)

[Total Marks:80]

N.B:

1. Question No:1 is compulsory
2. Attempt any three questions from the remaining five questions.
3. Figures to the right indicate full marks

- Q 1 (20)
- a Explain the concept of soil heating.
  - b Describe Micro piling and underpinning for strengthening the floor.
  - c Describe Solar paints.
  - d Write down the stepwise procedure of dredging.
- Q 2 (20)
- a Describe the procedure for erecting lightweight components on tall structures. 10
  - b Explain the balanced cantilever method of Bridge construction. 10
- Q 3 (20)
- a Describe the construction of the underwater diaphragm wall. 10
  - b Mention the key aspects of green building and comment on LEED and GRIHA ratings. 10
- Q 4 (20)
- a Explain the methodology adopted in the post-tensioning of the slab. 10
  - b What are Pre-Fabricated Vertical Drains? How are they installed? 10
- Q 5
- a Explain how seismic Retrofitting for Slabs is done. 10
  - b Explain micropiling & underpinning. 10
- Q 6 Write short notes on: (20)
- a 3-D printing in construction.
  - b Dewatering for underground open excavation.
  - c Air and moisture barrier.
  - d Articulated Structures.

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