

(Time : 3 Hours)

(80 marks)

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. Attempt any four. (20)

- a. Explain mud jacking and grouting for the foundation.
- b. Illustrate the construction sequence of a diaphragm wall using a neat sketch.
- c. Define dredging. State the purposes for which it is carried out
- d. What is seismic retrofitting? How is it achieved?
- e. Write a note on Smart Road Technology
- f. Explain launching techniques for heavy decks.

Q. 2

- a. Write an explanatory note on the construction sequence and methods of construction of domes (10)
- b. Write an explanatory note on coastal construction techniques for making them soundproof as well as air and moisture-resistant. (10)

Q. 3

- a. What are pre-engineered buildings? State their merits and demerits. Give some examples (10)
- b. Explain the procedure for underwater drilling and blasting (10)

Q.4

- a. Explain the construction sequence in the cooling tower of a thermal power plant (10)
- b. Describe the stepwise procedure of strengthening a beam using RC Jacketing. (10)

Q. 5

(10)

- a. Write an explanatory note on the trailing suction hopper dredger. (10)
- b. Describe the process of constructing concrete roads using pavers (10)
- Q. 6** a. Explain in detail various methods and techniques of ground improvement for soft soil. (10)
- b. Explain the stepwise procedure for the erection of large-span structures. (10)
