

Total No. of Questions : 6]

SEAT No. :

P4

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**APR-17/BE/Insem.-4**

**B.E. (Civil)**

**ADVANCED FOUNDATION ENGINEERING**

**(w.e.f. - June 2015) (2012 Pattern) (Elective - III(2))**

*Time : 1 Hour]*

*[Max. Marks : 30*

*Instructions to the candidates:*

- 1) *Answer Q.No.1 or Q.No.2, Q.No.3 or Q.No.4, Q.No.5 or Q.No.6.*
- 2) *Figures to the right indicate full marks.*

- Q1)** a) Explain IRC provisions for subsoil exploration of roads. [5]  
b) Explain any one case study of failure of deep foundation with proper justification of failure. [5]

OR

- Q2)** a) Explain depth of soil exploration for different types of foundations as per IS 1892. [5]  
b) Explain in detail the soil exploration program for construction of a bridge. [5]

- Q3)** a) Explain uplift piles and Anchor piles with suitable sketches. [5]  
b) Explain cyclic load test for piles with suitable sketch. [5]

OR

- Q4)** a) Write a short note on racer piles. [5]  
b) What are the I.S. code provisions for design of deep foundation. [5]

- Q5)** a) Draw a neat sketch of under reamed pile foundation & explain functions of each component parts. [5]  
b) Explain in detail Design considerations for sand drains. [5]

OR

- Q6)** a) Write a static formula to estimate load carrying capacity of under reamed piles & explain meaning of each term. [5]  
b) Write a short note on stone columns. [5]

