

Total No. of Questions : 12]

SEAT No. :

P3245

[Total No. of Pages : 2

**[5353] - 108**  
**T.E. (Civil) (Semester - II)**  
**FOUNDATION ENGINEERING**  
**(2012 Pattern)**

*Time : 2½ hours]*

*[Max. Marks : 70*

*Instructions to the candidates:*

- 1) *Answer Q.1 or Q.2, Q. 3 or Q. 4, Q.5 or Q.6 Q.7 or Q.8, Q.9 or Q.10. and, Q.11 or Q.12.*
- 2) *Neat diagrams must be drawn whenever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume suitable data ,if necessary and mention it clearly.*

**Q1)** Explain with neat sketch Seismic Refraction method of Soil Exploration. [7]

OR

**Q2)** Define Disturbed Sample and Undisturbed Sample. State the factors affecting on Sample Disturbance [7]

**Q3)** Differentiate between Local shear failure and General shear failure. [6]

OR

**Q4)** Differentiate between Terzaghi's Bearing Capacity Theory and Meyerhof's Bearing Capacity Theory. [6]

**Q5)** Define i) Immediate Settlement ii) Consolidation Settlement iii) Secondary Settlement with variation of settlement with time. [7]

OR

**Q6)** Explain with neat sketch laboratory one dimensional consolidation test [7]

**P.T.O.**

- Q7)** a) Write short note on i) End Bearing Pile. ii) Friction Pile [6]  
b) Explain with neat sketch various component of well foundation. [6]  
c) Discuss the necessity of pile foundation. [4]

OR

- Q8)** a) Define Negative Skin Friction and state the situation where Negative Skin Friction can be anticipated. [6]  
b) Draw the neat sketch with application i) Open Caisson ii) Box Caisson iii) Pneumatic Caisson. [6]  
c) Write a short note on caisson disease. [4]

- Q9)** a) Write short note on i) Earth fill coffer dam. ii) Rockfill Cofferdam. [6]  
b) List out the various techniques of Ground soil improvement. Explain any one. [6]  
c) Explain any four engineering problem associated with black cotton soil. [4]

OR

- Q10)** a) Write short note on i) Bored Pile ii) Under reamed Pile. [6]  
b) Plot the Pressure Distribution diagram for i) Cantilever Sheet Pile ii) Anchor Sheet Pile. [6]  
c) State the characteristic of Black Cotton soil. [4]

- Q11)** a) State the various function of geosynthetic materials and explain any two function with suitable example [7]  
b) What is liquefaction? Discuss the effect of liquefaction. [6]  
c) Write a short note on classification of Geosynthetic material. Explain any one. [5]

OR

- Q12)** a) Write down the application of geosynthetic material in different area with suitable example with sketch. [7]  
b) Define the term i) Earthquake ii) Epicenter iii) Focus iv) Magnitude. [6]  
c) Differentiate between P-wave and S-wave. [5]

