MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL

Paper Code : CE(PE)601B Foundation Engineering
UPID : 006735

Time Allotted : 3 Hours   *Full Marks :70*

The Figures in the margin indicate full marks.
Candidate are required to give their answers in their own words as far as practicable

Group-A (Very Short Answer Type Question)

1. Answer any ten of the following :   [1 x 10 = 10]

   (I)   Classify shallow foundation

   (II)   List out the type of pile based on material used?

   (III)   The internal molecular attraction of a soil, the cohesion_____ in well compacted clays.

   (IV)   The coefficient of curvature is defined by _____

   (V)   If S, L and R are the arc length, long chord and radius of the sliding circle then the perpendicular distance of the line of the resultant cohesive force, is given by _____

   (VI)   Precompression method is useful for compacting _____

   (VII)   What are assumptions in terzaghi's bearing capacity theory?

   (VIII) Define angle of repose?

   (IX)   Minimum size of the particles of silt soil, is _____

   (X)   The coefficient of compressibility of soil, is the ratio of _____

   (XI)   Define area ratio.

   (XII)   In a liquid limit test, the moisture content at 10 blows was 70% and that at 100 blows was 20%. The liquid limit of the soil, is _____

Group-B (Short Answer Type Question)

Answer any three of the following :   [5 x 3 = 15]

2. Classify Foundation.   [5]
3. What are the types of pile foundation?   [5]
4. Write down the methods of installation of pile foundation.   [5]
5. Write down the methods of soil exploration techniques.   [5]
6. Describe Vane shear test.   [5]

Group-C (Long Answer Type Question)

Answer any three of the following :   [15 x 3 = 45]

7. What are the factors affecting selection of types of Pile Foundation? Classify pile foundation based on   [15]
    function or use.

8. Describe indirect method of subsoil exploration.   [15]
9. Briefly describe the selection of length of pile.   [15]
10. Describe standard penetration test   [15]
11. Write down applications of geo-synthetics.   [15]

*** END OF PAPER ***