Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

1) In a Soil-Structure Interaction Analysis, precise modeling of unbounded domain is very important. For this at the boundary, viable elements are used. Major advantages of these elements are
   - These are very simple to apply
   - These work well with vertically propagating waves only
   - These can also be used with inclined waves
   - These are frequency independent

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   These can also be used with inclined waves

2) The dynamic stiffness of a pile foundation (soil-pile system) varies with
   - Properties of Soil
   - Properties of Pile
   - Frequency of Excitation
   - All of the above

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   All of the above

3) The dynamic stiffness of a pile group (soil-pile system) is significantly varies with
   - Pile Spacing
   - Frequency of Excitation
   - Bath A and B
   - None of the above

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   Bath A and B

4) A wall foundation is subjected to the identical columns loads, where the location of columns is also symmetric. The wall pressure will be
   - Maximum at the center and minimum at the corners
   - Minimum at the center and maximum at the corners
   - Identical at all locations of the columns
   - Zero at the center and constant at other locations

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   Maximum at the center and minimum at the corners

5) According to AASHTO, the bearing capacity of a shallow foundation on the face of a slope varies with slope angle as follows
   - Increases with the slope angle
   - Decreases with the slope angle
   - Does not vary with the slope angle
   - None of the above

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   Decreases with the slope angle

6) Vitanov, and Pande (1999) presented tables for bearing capacity of shallow foundations on slopes of cohesive soils. According to this, nondimensional bearing capacity factors \(N_d\) and \(N_h\) are functions of \(\theta\), where \(\theta\) is angle of internal friction of soil, \(\beta\) is slope angle, \(D_s\) is depth of footing, \(i\) is setback distance and \(B\) is width of footing
   - \(\theta\) only
   - \(\beta, D_s, B, i\)
   - \(\alpha, D_s, B, i\)
   - None of the above

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   \(\beta, D_s, B, i\)

7) Kamesh and Jain (2003) presented charts for bearing capacity factors of shallow foundations on the slopes for earthquake loads. According to this, nondimensional bearing capacity factors \(N_d\), \(N_h\), and \(N_k\) are functions of
   - Increases with seismic coefficient
   - Decreases with seismic coefficient
   - No change with seismic coefficient
   - May increase or decrease with seismic coefficient

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   Decreases with seismic coefficient

8) According to IS 1994, for soft slopes, the minimum horizontal distance from the lower edge of the footing to the sloping surface shall be at least
   - 30 cm
   - 60 cm
   - 90 cm
   - 1 m

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   60 cm

9) According to IS 1993-2015, when earthquake forces are considered, the net bearing pressure in footings passing through the soft soils can be increased by
   - 50%
   - 25%
   - 10%
   - 5%

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   25%

10) According to IS 1893-2016, keeping all other parameters constant, the design horizontal coefficient \(A_h\) for a time period \(T = 0.2\) sec will be maximum for

   - Type 1: Rigid or Hard Soil
   - Type 2: Medium Soil
   - Type 3: Soft Soil
   - The same for all three types

   No. the answer is incorrect. Score: 0
   Accepted Answers:
   The same for all three types