

REGISTRATION NUMBER

SRINIX COLLEGE OF ENGINEERING

2ND INTERNAL EXAMINATION-2017-18

Subject-FE

Semester-6TH

Branch-CIVIL

Time-1.30Hrs

Full Mark-30

ANSWER ALL QUESTIONS (PART-A)

[2X5]

- 1. The value of bearing capacity factor for cohesion N_c , for piles as e Meyerhof is taken as
 - a) 6.2
 - b) 9.0
 - c) 5.14
 - d) 5.17
- 2. Which of the following earth pressure theories is directly applicable to bulk heads?
 - a) Rankine's theory
 - b) Coulomb's theory
 - c) Both
 - d) None of the above
- **3.** A failure wedge develops if a retaining wall
 - a) Moves away from the backfill
 - b) Moves towards the backfill
 - c) Sinks downwards
 - d) Stresses equally by vertical and horizontal forces
- 4. Under-reamed piles are generally
 - a) Driven piles c) precast piles
 - b) Board piles d) all the above
- 5. Negative skin friction on piles are generally
 - a) Is caused due to relative settlement of the soil
 - b) Is caused in soft clays
 - c) Decreases the pile capacity
 - d) All of the above

ANSWER ALL QUESTIONS (PART-B)

- **1.** Discuss the Feld's rule.
- **2.** Discuss the static formula for determining the ultimate bearing capacity of a pile in cohesive soil.
- 3. Sketch a well foundation showing all its components.
- 4. What do you mean by N_{60} ?
- 5. State the effect of water table on the bearing capacity of a soil

ANSWER ANY ONE QUESTION (PART-C)

- 1. Design of friction pile group to carry a load of 3000kN including the weight of the pile cap at a site where the soil is uniform clay to a depth of 20m, underlain by rock. Average unconfined compressive strength of the clay is 70KN/m². The clay may be assumed to be of normal sensitivity and normally loaded, with liquid limit 60%. A factor of safety of 3 is required against shear failure.
- 2. Discuss how you can obtain the bearing capacity of a soil from a standard penetration test.
- **3.** Discuss various types of shallow foundations with neat sketches. How do you estimate the settlement of footings?

[10X1]