[5255]-105

M.E. (Civil) (Structures)
DESIGN OF FOUNDATIONS
(2008 Pattern) (Semester - I) (Elective - I)

Time : 4 Hours] *[Max. Marks : 100*

Instructions to the candidates:

 1) *Answer any TWO questions from each section.*
 2) *Answers to the two sections should be written in separate books.*
 3) *Neat diagrams must be drawn wherever necessary.*
 4) *Your answers will be valued as a whole.*
 5) *Use of electronic pocket calculator is allowed & IS codes are not allowed.*

SECTION-I

Q1) a) Explain with example, steps for determination of consolidation settlement. **[10]**

 b) Discuss **[15]**

   i) A-line chart,

   ii) SSI,

   iii) Teng's correlations,

   iv) IS-1892-1972, Provisions,

   v) Proportioning of footing.

Q2) a) Discuss the needs for different types of raft. **[9]**

 b) Explain the steps for 'Design of flat slab raft'. **[8]**

 c) Explain the steps for 'Beam & raft (slab) foundation'. **[8]**

Q3) a) Compare, design of foundations for Rotary m/c & Impact m/c, wrto IS-2974-Pt-II-1966. **[15]**

 b) Explain determination of Cu & Amplitude. **[10]**

P.T.O.

SECTION-II

Q4) a) Compare NSF & PSF. **[8]**

b) Explain steps for Design of precast & cast in-situ piles. **[9]**

c) How will you compute settlement of pile group. **[8]**

Q5) a) Discuss the steps for 'Design of RCC precast pile'. **[17]**

b) Explain the steps for 'Rees & Matlock Method'. **[8]**

Q6) a) Explain the steps for 'Design of pile cap'. **[9]**

b) Discuss 'IS code recommendations' for 'shell foundations'. **[8]**

c) Compare 'Hyperbolic & conical RC shell foundations' with & without edge beams. **[8]**

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