DRAUGHTS MAN (CIVIL)
(THEORY)

Time:-3 Hours **Marks:-100**

Note: Attempt five questions in all. Question No. 1is compulsory. All question carry equal marks.

1. Write True or False.
   a) The main reinforcement in RCC cantilever beam is placed at top fiber.
   b) The road connecting the neighboring countries is known as national highway.
   c) The highest point on carriage way is known as crown.
   d) A bench mark is a point of known elevation.
   e) A metallic tape is made of linen.
   f) The portion of a brick which is cut at one corner such that at one end its width is half of that of a full brick is called king closer.
   g) Dog- legged stair is a half turn stair.
   h) The type of footing which is used to transmit heavy loads through steel columns is raft foundation.
   i) The function of king post in a king post roof truss is to prevent the tie beam from sagging at its centre.
   j) While constructing a bridge upon a river, the foundation to be adopted in pillars should be pile foundation.
2. a) What are methods of plane tabling? How are centering and leveling done in plane table surveying?
   b) Describe with a sketch how you will measure distance on slopping ground.
3. a) State briefly the requirements of a good staircase. Name the materials used for construction of staircase in buildings.
   b) Briefly describe various types of stairs. Give neat sketches of any two common types of staircases in buildings.
4. a) What are the materials used in making RCC work? What is under reinforced section, balanced section and over reinforced section in RCC?
   b) State the proportion of concrete you will recommend for the works Lintel, Slab, Stairs, Pile, and footpath.
5. a) What do you understand by a shallow foundation? Draw sketches to show various types of shallow foundations.
   b) Draw typical sketches for foundation for combined footing for two RCC columns.
6. List out characteristics of good brick. Name the tests that are carried out to determine them.
7. Differentiate between:
   a) Equal angle section and unequal angle section.
   b) Soft wood and hard wood.
   c) Second class brick and third class brick.
   d) Bullnose brick and cownose brick.
   e) Fine aggregate and coarse aggregate.

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