School	:	**School Of Planning and Architecture**
Course	:	**II Year III SEM**
Subject Name	:	**Architectural Structures-III**
Subject Code	:	**BAR03102**

Max. Time: 1.5 hrs.   **Max. Marks: 12**

NOTE:-   Attempt three questions. There is internal choice in Q. 1 & 2, Q. 3 & 4, Q. 5 & 6.

Sec-A (CO 3) (Max. Marks-6)   Marks

Q.1   Explain HRB classification for soil with all details.   **(6)**

OR

Q.2   What is consistency of soil? Describe stages and explain in Atterberg's consistency limits details.   **(6)**

Sec-B (CO 4) (Max. Marks-6)

Q.3   **(a)**   Derive relation in G, e, w and s.   **(1.5)**

(b)   The porosity of a soil sample is 37% and specific gravity is 2.7 calculate void ratio and dry density.   **(1.5)**

OR

Q.4   A saturated clayey sample weighing 1450gms, weighs 1321gms after oven drying. If its dry density is1287kg/m^3, determine void ratio and water content. Specific gravity of soil is 2.67.   **(3)**

Q.5   Express relation between bulk unit weight, specific gravity, water content and void ratio.   **(3)**

OR

Q.6   Calculate degree of saturation, void ratio and porosity for a soil mass of bulk density 1.76 gm/cc. G=2.7 and w=40%   **(3)**