

**COLLEGE OF ENGINEERING, DEPARTMENT OF CIVIL ENGINEERING**

**COURSE: Structural Design I (RCD) CVE 308 UNITS: 3**

**DEGREE: B.ENG (CIVIL ENGINEERING)**

**ASSIGNMENT 1: DESIGN THEORIES, SLAB & STAIR CASES**

***QUESTION ONE***

(a) State the purpose of structural design.

(b) Differentiate between limit state and elastic method of design.

(c) It is required to design a straight flight with the following data: fy=410N/mm2, fcu= 25N/mm2, rise = 150mm, tread = 275mm, slab thickness =150 mm. Check for deflection. Assume 12 steps.

***QUESTION TWO***

 (a) Identify all the panels in Figure 1.

 (b) Design for tension reinforcement.

 (c) Check for serviceability limit state of deflection.

BE GUIDED, BE HOME, STAY SAFE & POSITIVE TOO

FIGURE 1