



### ASSIGNMENT ON CHAPTER THREE

Assignment Title: Analysis Methods and Design of Flat Slab System

Due Date: One week

The attached figure shows Ground Floor architectural plan view of a 3B+G+10 Mixed use building. The building is planned to have a flat slab floor system. To study the difference between flat slab analysis techniques and to check your capacity of preparing structural drawings of flat slabs, you are required to:

1. Analyze the East – West strip along axis 4 using
  - a) Direct Design Method
  - b) Equivalent Frame Method
  - c) Finite element software (SAFE)

and compare and contrast the analysis results (Bending moments)

2. Design the East – West strip along axis 4 using Direct Design Method and prepare structural drawings.

Assume:

- Floor to Floor height of 3.6 m
- C25/30 Concrete for the slab and C40/50 Concrete for the column
- Column cross-section of 800 mm x 800 mm
- S400 reinforcement steel

NOTE: The assignment is to be done in GROUPS!