DESIGN THE STRUCTURAL ELEMENTS OF A STUDENT'S HOSTEL

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ABSTRACT

The title of this project is it designs the structural elements of a student's hostel. The hostel is located in the city, where it is near to the collage. This is to enable the students to use the collage's facilities regularly.

This is a block of three storey hostel. Each block of hostel consists of 36 rooms, 6 water closets and 6 staircases. Where each floor consists of 12 rooms, 2 water closets and 2 staircases.

The sizes of each room are 3.2 m x 3.5 m. The rooms are wide enough to fit some basic furniture (e.g. tables, chairs, cupboards and beds) for 2-3 students. The design information for the hostel is given below:

Exposure condition – internal	mild
- External	moderate
Fire resistance	1 hour
Dead loads – partitions and finishes	1.5 Kn/m2
- Mass density of concrete	2.4 Kn/m3
Imposed loads – roof	1.5 Kn/m2
- Typical floors	3 Kn/m2
Allowable soil bearing pressure	200 Kn/m2

The dead loads and imposed loads are taken from the recommendations of BS 6399, and the design is based on limit-state with references of British Standard.