Chapter Five

Conclusion and Recommendations

5.1 Conclusion:

From the results of this research , the following conclusion can be drawn:

1.This research concentrate on design a multi storey building consist of twenty storeys building by using manual calculations and computer programmes named Etabs and Safe according to different international codes such as: BS8110-1997, ACI-2005, Eurocode 2-1992.

2. The area of steel for flat slab by using AC1-2005 is greater than the area of steel for flat slab by using manual calculations (BS8110-1997 code) about 3% ,and greater than the area of steel by using both codes BSI8110-1997 and EC2-1992 codes about 1%.

3. The area of steel for columns by using AC1-2005 is greater than the area of steel for columns by using manual calculations(BS8110-1997 code) about 0.2% ,and greater than the area of steel by using both codes BSI8110-1997 and EC2-1992 codes about 2%.

4. The area of steel for raft foundation by using EC2-1992 code is greater than the area of steel in manual calculations(BS81101997code) about 29% ,and greater than the area of steel by using BSI8110-1997 code about 5% and greater than the area of steel by using AC1-2005 code about percentage 3%.

5.The thickness of flat slab is suitable of all storeys but it can be reduce in the last floor.

5.2 Recommendations

From the obtained results in this study, it is recommended to:

1. Use EC2-1992 code and BS8110-1997 code in the analysis and design of reinforced concrete buildings in Sudan.

2. Use lateral load resisting system e.g: shear wall and core system to obtain larger factors of safety.

For further studies in the field of structure it is recommended to:

1. Use the pre-stress and pre-cast for the analysis and design.

2. Use different types of concrete strengths e.g:35,40,45,50 N/mm^2.

3. Use other programmers like e.g: pro, Prokon,Sap2000 etc.

4. Use more international codes for comparison e.g: South Africa code, Indian code.. etc.