BANHA UNIVERSITY
SHOUBRA FACULTY OF ENGINEERING
DEPARTEMENT OF CIVIL ENGINEERING
THIRD YEAR CIVIL-GENERAL
R.C. Structures (2nd term 2016-2017)

Benha University
Faculty of Engineering
Of Shoubra, Civil Dep.

Assignment
ANALYSIS AND DESIGN OF R.C. ARCHED SLABS

*Systematic arrangement of calculations and clear neat sketches are essential.
*Any data not given is to be reasonably assumed according to Egyptian Code of Practice.

Given Data:

Characteristic strength of concrete used (f$_{cu}$)　　 = 25 MPa

The main steel is high tensile steel of grade (f$_y$)　 = 360/520

The stirrups steel is mild steel of grade (f$_{yst}$)　　 = 240/350

Live Load (L.L)　　　　　　　　　　　 = 0.50 kN/m^2

Flooring Cover (F.C)　　　　　　　　　 = 0.50 kN/m^2

Required:

a) **Figure 1** showing a hall of 18m wide covered by a reinforced concrete circular slab with a tie spaced at 4.0 m as shown. It's required to:

1- Calculate internal forces in all structural elements and then design the critical sections for B.M, S.F and N.F.

2- Draw to convenient scale the building showing clearly all concrete dimensions and steel reinforcement in elevation and cross sections.
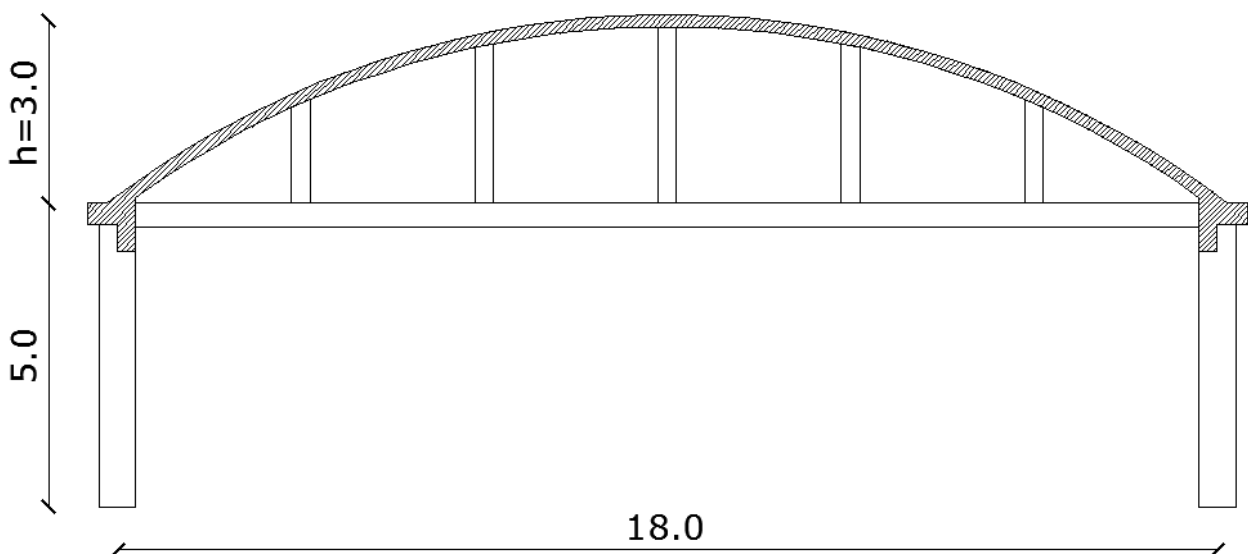

Figure (1)