PROJECT WORK DIMENSIONS:

Main wing span = 90cm

Chord length = 23cm and 14cm

Mean chord = 18.5cm

Main wing area = 1665sq.cm

Canard wing span = 56cm

Taper ratio = 1.6

Canard wing chord = 13cm and 8.12cm

Canard mean chord = 10.56cm

Canard wing area = 591sq.cm(35% of the main wing area)

Nose length = 8cm

Airfoil used =NACA 2412

Fuselage shape = square

Size of the fuselage = 10cm

Main and canard wing configuration = high wing

Main wing aspect ratio = 6.48

Canard wing aspect ratio = 5.30

Canard airfoil thickness = 1.267cm

Span of the canard wing = 56cm

Elevator width = 6cm

Aileron width =4cm

Rudder width = 4cm

Stabilizers area =480sq.cm

Stabilizers position = at rear end of the fuselage (10cm behind the main wing)

Total length of the model = 8cm + 13cm +28cm+ 23cm +10cm +15cm = 97cm

Canard wing specifications based on NACA 2412

Mean camber for the airfoil = 0.02\*10.56 = 0.2112cm

Location of maximum camber from the leading edge = 0.4\*10.56 = 4.224cm

Max thickness = 0.12\*10.56 = 1.267cm

Materials to be used:

* Styrofoam
* Hot glue gun
* Fabric

New dimensions

Main wing area = 1665sq.cm

Chord of the main wing = 18.5 cm

Wingspan = 90cm

Mean chord = 10.56cm

Span of the canard = 56cm

Width of the fuselage = 10cm

Distance between the leading edges of the wings = 28cm

Length of the canard wing = 23cm