**INDIAN SCHOOL AL WADI AL KABIR**

**Engineering Graphics**

**Holiday Assignments**

1.Divide a straight line AB, proportionate to four given lines a,b,c and d.(a=5,b=4,c=3,d=2).

2.Construct a Right angled Triangle ABC, having its hypotenuse AB=60 and the median from the angular point C making the angle CDB with the hypotenuse equal to a given angle d.(angle D = 60 degree).

3.Consruct an Isosceles Triangle ABC,having each of its sides = 50mm and each of its base angles equal to the given angle B.(angle B = 45 degree).

4.Construct an Isosceles Triangle ABC,having its base equal to 40 mm and its altitude AD=40mm.

5.Construct an Isosceles Triangle ABC,having its perimeter EF = 55 mm and its altitude AD=20mm.

6.Construct an Isosceles Triangle ABC,having the difference of its hypotenuse and side equal to 20mm.

7.Construct a Triangle ABC,having its base BC=50mm,side AB=40mm,side AC=60mm.

8.Construct a Triangle ABC,having its altitude AD 35mm,side AB 40mm and side AC 50mm.

9.Construct a Triangle ABC,having its base BC 40mm,the sum of other two sides 50mm and inclined angle equal to given angle C (angle C= 60 degree).

10.Construct a square ABCD of 40mm sides with compasses.

11.Construct a Rhombus ABCD,having its diagonal AC=60mm and its side equal to 40mm.

12.Construct a Rhombus ABCD,having its diagonal AC=45mm and the diagonal BD=35mm.

13.Construct a Trapezion or Kite ABCD,having its diagonal AC=50mm,its adjacent sides AD and AB each equal to 30mm and CD and CB equal to 40mm.

14.Construct an Irregular polygon ABCDE from the following data: Sides: AB=25,BC=30,CD=35,ED=20 and AE=20mm.Diagonals: AC=42 and AD=37mm.

15.Draw a direct common Tangent to two equal circles of diameter 30mm,having their centres O and C,35mm apart. (P.T.O)

16.Draw a circle to pass through a given point C and to touch a given straight line AB in a given point D.

17.Draw a circle to touch a given straight line AB and to pass through two points C and D,given outside it,at equal distance from it.

18.Construct a spiral about any regular polygon (Pentagon) of 7mm sides.

19.Construct an Involute of a circle of 30mm diameter.

20.Draw the cycloid of a circle whose diameter equal to 40mm.

**Note:** All the dimensions should be in millimeters (mm).

**Date of Submission** : On or before 2nd of August 2017.