



Rajiv Gandhi Institute of Petroleum Technology
Jais, Amethi

An Institution of National Importance, Government of India

Engineering Graphics (ME121)

Geometrical Construction-1

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Topics

1. Lines
2. Arc
3. Circle
4. polygons

Types of Lines

1. **Outlines** : lines drawn to represent visible edges(continuous thick)
2. Dimension line: to represent dimension (continuous thin line)
3. **Extension or projection line**: continuous thin line
4. **Hidden Line**: hidden edges and hidden surface and short dashes and medium thickness
5. **Center Line**: for indication of center of axis of object and thin and long chain composed of alternate long and dot
6. Cutting plane line: location of cutting plane and it is a long, thin, chain line, thick at ends

Exercise

1. Draw a line AB 75 mm long. At B, erect a perpendicular BC 100 mm long. Draw a line joining A and C, and measure its length and construct a square on each line as side.
2. Draw a line PQ 100 mm long. At any point near its center, erect a perpendicular OA 65 mm long. Through A, draw a line parallel to PQ.
3. Draw two lines AB and AC making an angle of 75° , draw a circle of 25 mm radius touching them
4. The distance between the centers of two circles of 65 mm and 90 mm diameters is 120 mm. draw an internal and external common tangents to the two circles.
5. Construct a regular pentagon of 30 mm side.