## PAPER-III
## GEOMETRY

e : The question paper will be divided into three ions A, B and C as follows:

***tion A*** : In this section- ten questions will be set ng two questions from each unit. Each question be of short answer type not exceeding 20 words will carry 3/4mark. The candidate will be required ttempt all the questions (aggregating 7.5 marks).

***tion B*** : In this section- ten questions will be set ng two questions from each unit. The answer of h will not exceed 250 words or two and a half e. Each question will be of 7.5 marks. The didate will be required to attempt five questions ll taking one question from each unit (aggregating 5 marks).

***tion C*** : *In* this section four questions will be set ering all the five units and whose answers shall exceed 500 words or five pages each. Each question y have sub parts in it and will carry 15 marks. 'Me didate will be required to attempt any two stions (aggregating 30 marks).

### UNIT -I

neral equation of second degree, nature of conic entricity and foci of conic, Tracing of different hics.

ipse : Tangent, normal, Chord of contact of the gents, pole and polar, eccentric angle, auxiliary



circle, director circle, equation of chord in term of middle point, pair of tangents, conjugate lines, diameter and conjugate diameters and their properties.

### UNIT-II

Hyperbola: Parametric coordinates, tangent, normal chord of contact of tangents, pole and polar etc. asymptotes, conjugate hyperbola, conjugate diameters, rectangular hyperbola, equation of hyperbola referred to its asymptotes.

Polar Equations :Polar equation of a conic, Polar equations of tangent, perpendicular lines and normal, director circle of the conic.

### UNIT-III

Plane: Revision of Equations of plane in different forms, bisectors of angles between two planes, condition for homogeneous, equation to represent two planes and angle between them, projection on a plane area of a triangle and volume of tetrahedron.

### UNIT-IV

Straight line : General equation of line, symmetric form, line passing through one and two points, perpendicular distance of a point from a line, angle between a line and a plane, condition for co-planarity of two lines, equations of line intersecting two lines, skew lines, shortest distance between two lines, intersection of three planes and three lines.