MONTHLY SYLLABUS
SESSION-2017-18
CLASS-XI
SUBJECT : ENGINEERING GRAPHICS
FIRST TERM – APRIL 2017 TO SEPTEMBER 2017

MONTH	CONTENT
July 2017	Introduction and understanding of Engineering Graphics as an indispensable tool for Engineers, Technocrats, Architects, Draftsmen, Surveyors, Designers and many other professionals in the recent times.
	Practice of printing English alphabets (capital and small), numerals in standard proportions.
	Unidirectional/aligned system of dimensioning as per SP: 46-2003 (Revised).
	Unit 1: Construction of lines, angles and their divisions. Simple questions based on triangles, square, rhombus, trapeziums, regular polygons-pentagon, hexagon and octagon.
	Unit 2: Construction of circles, external and internal tangents of circles, inscribing, circumscribing circles in equilateral triangle, square, rhombus, regular polygons-pentagon and octagon.
	Unit 3: Construction of Engineering curves:
	(a) Ellipse by concentric circles, interesting arcs and intersecting lines.
	(b) Parabola by intersecting lines and intersecting arcs.
	(c) Involute of a circle, cycloid, helix and sine curve.
	Unit 4: Methods of orthographic projections and dimensioning strictly as per SP: 46- 2003 revised conventions. Projection of points, lines.

	Practice exercise from CBSE Book and other standard books. Discussion on Practical exercises and practical related to topic.
August 2017	**Unit 5:** Orthographic projections of Regular Plane figures – triangle, square, pentagon, hexagon, circle and semi-circle. **Unit 6:** Orthographic projections of right regular solids such as cubes, prisms and pyramid, (square, triangle, pentagonal and hexagonal), cones, cylinders, spheres, hemi-spheres and frustum of pyramids and cone when they are kept with their axis – (a) perpendicular to HP/VP. Practice exercises from CBSE Book and other standard books. Practical exercises and practical.
September 2017	Revision for SA – I Exam Ist TERM PRACTICAL EXAM
SECOND TERM – OCTOBER 2017 TO MARCH 2018	
October 2017	Discussion of Question Paper and Problem Solution **Unit 6: contd.** (b) parallel to one plane and inclined to the other. (c) parallel to HP and VP both. **Unit 7:** Section of solids under the same conditions mentioned above in Unit 6, made by the horizontal, vertical and inclined planes. Practice exercises from CBSE Book and other standard books. Introduction to **COLLAB-CAD;** Practical exercises and practical.
November 2017	**Unit 7: contd…** **Unit 8:** Orthographic projections of simple machine blocks.

	Practice exercises from CBSE Book and other standard books. Practical exercises and practical also using **COLLAB-CAD.**
December 2017	**Unit 9:** Construction of isometric scale showing main divisions of 10 mm and smaller divisions of 1mm each. Isometric projection (drawn to isometric scale) of figures such as triangles, squares, pentagons, hexagons, circles and semi-circles with their surface parallel to HP or VP and its one side or diagonal or diameter should be either parallel or perpendicular to HP/VP. Practice exercises from CBSE Book and other standard books. Practical exercises and practical also using **COLLAB-CAD.**
January 2018	**Unit 10:** Development of the surfaces of following solids; 1) Cube, cuboid, prisms-triangular, square, pentagonal and hexagonal. 2) Pyramids (triangular, square, pentagonal and hexagonal). 3) Right circular cylinder and cone. Practice exercises from CBSE Book and other standard books. Practical exercises and practical also using **COLLAB-CAD.**
February 2018	Revision for SA – II Exam including Ist Term Syllabus **IInd TERM PRACTICAL EXAM**
March 2018	**SA-II / IInd TERM EXAM**