

MONTHLY SYLLABUS

SESSION-2017-18

CLASS-XII

SUBJECT : ENGINEERING GRAPHICS

FIRST TERM – APRIL 2017 TO SEPTEMBER 2017

MONTH	CONTENT
April 2017	<p>Revision of concepts learned in class XI</p> <p>Unit I: Isometric Projection of Solids</p> <p>(i) Construction of isometric scale showing main divisions of 10 mm and smaller divisions of 1 mm, also showing the leading angles. Drawing helping view/s such as triangles, pentagon, hexagon, etc., using isometric scale.</p> <p>(ii) Isometric projections (drawn to isometric scale) of solids such as cube, regular prism and pyramids (triangular, square, pentagonal and hexagonal), cone, cylinder, sphere, hemisphere, frustum of right regular pyramids (triangular, square, pentagonal, hexagonal) and cone, when they are cut by a plane parallel to the base. The axis and the base side of the solid should be either perpendicular to HP / VP or parallel to HP and VP. (Indicate the direction of viewing).</p> <p>Note:</p> <p>(1) Question on frustum will be asked in vertical position only.</p> <p>(2) Hidden lines are not required in isometric projection.</p> <p>Practice exercises from CBSE Book and other standard books.</p> <p>Introduction to COLLAB-CAD; Practice on regular plane figures and simple solids. Discussion of missing view problems prescribed by CBSE with 3D machine block.</p>

<p>May 2017</p>	<p>Unit I: Isometric Projection of Solids — contd.</p> <p>(iii) Combination of two solids (except "frustum" of Pyramids and Cone) Keeping the base side parallel or perpendicular to HP/VP and placed centrally together, axis of both the solids should not be given parallel to HP.</p> <p>Assignments for Summer Vacation.</p>
<p>July 2017</p>	<p style="text-align: center;">SUMMER VACATION</p> <p>(iv) Combination of two solids.... Contd.</p> <p>(v) Unit II: Machine Drawing (as per SP 46:2003)</p> <p>A. Drawing of machine parts</p> <p>(i) Full scale with instruments</p> <p>Introduction of threads;</p> <p>Standard profiles of screw threads — Square, Knuckle, B.S.W. and Metric (external and internal);</p> <p>Bolts — Square, Hexagonal, Tee and Hook;</p> <p>Nuts — Square and Hexagonal;</p> <p>Plain washer;</p> <p>Practice exercises from CBSE Book and other standard books.</p> <p>Practicals by the use of COLLAB-CAD; and of missing view problems prescribed by CBSE with 3D machine block.</p>
<p>August 2017</p>	<p>Combination of nut and bolt with or without washer for assembling two parts together;</p> <p>Single riveted lap joint with standard dimensions.</p> <p>(ii) Free-hand sketches</p>

	<p>Conventional representation of external and internal threads; Studs — plain, square-neck and collar;</p> <p>Screws — round-head, cheese-head, 90° flat counter sunk-head, hexagonal socket head and grub-screw;</p> <p>Rivets — snap head, pan head-without tapered neck, flat head and 60° countersunk flat head;</p> <p>Note: <i>In the above mentioned machine parts (free hand sketches) "in-position" shall not be asked.</i></p> <p>Practice exercises from CBSE Book and other standard books.</p> <p>Practicals by the use of COLLAB-CAD; and of missing view problems prescribed by CBSE with 3D machine block.</p>
September 2017	<p>Keys — rectangular taper sunk key, woodruff key, double-head feather key with gib head on both ends.</p> <p style="text-align: center;">Revision for SA — I Exam</p>
11/09/2017 To 26/09/2017	SA-I/Ist Term Exam
SECOND TERM – OCTOBER 2017 TO MARCH 2018	
October 2017	<p>Discussion of Is' Term Question Paper and Solutions.</p> <p>B. Assembly drawings and Dis-Assembly drawings</p> <p>(Internal choice will be given between an Assembly drawing and a Dis-Assembly drawing).</p> <p>Note:</p> <p><i>1. In all Assembly drawings, half sectional front view will be asked. Side/End view or Top View/Plan will be drawn without section.</i></p> <p><i>2. In all the Dis-assembly drawings, only two orthographic</i></p>

	<p><i>views (one of the two views may be half in section or full in section) of any two parts.</i></p> <p><i>3. (a) In all sectional views, hidden lines / edges are not to be shown.</i></p> <p><i>(b) In all full views, hidden /edges are to be shown.</i></p> <p>1. Bearings</p> <p>(i) Open-Bearing</p> <p>(ii) Bushed-Bearing</p> <p>2. Rod-Joints</p> <p>(i) Cotter-joints for circular-rods (socket and spigot joint)</p> <p>(ii) Cotter-joints for round-rods (sleeve and cotter joint)</p> <p>(iii) Cotter-joints for square rods (Gib and cotter-joint)</p> <p>Practice exercises from CBSE Book and other standard books.</p> <p>Practicals by the use of COLLAB-CAD; and of missing view problems prescribed by CBSE with 3D machine block.</p>
November 2017	<p>3. Tie-rod and Pipe-joint</p> <p>(i) Turnbuckle</p> <p>(ii) Flange pipe joint</p> <p>4. Couplings</p> <p>(i) Unprotected Flange Coupling (having socket and spigot • I arrangement)</p> <p>(ii) Protected Flange Coupling</p> <p>5. Pulleys</p> <p>(i) Solid Cast Iron Pulley - (up to 200mm diameters) having solid web</p> <p>Practice exercises from CBSE Book and other standard books.</p>

	Practicals by the use of COLLAB-CAD ; and of missing view problems prescribed by CBSE with 3D machine block.
December 2017	Revision of entire curriculum Practice from sample papers
	Mock Test
17/12/2017 To 27/12/2017	Discussion of Mock Test Question Paper and Solution Practice from sample papers & previous years papers
28/12/2017 To 08/01/2018	REMEDIAL CLASSES in WINTER BREAK
January 2018	COMMON PRE-BOARD SCHOOL EXAMINATION
February 2018	Discussion of pre-board question paper, practice from CBSE ' to sample papers, practice from previous years CBSE board question papers. CBSE BOARD PRACTICAL EXAMS
March 2018	ANNUAL EXAMINATION CBSE