

CONTENT AREAS FOR TECHNICAL DRAWING

S/N	CONTENT	COMPETENCIES	DESCRIPTIVE STATEMENT
1	Drawing instruments, equipment and materials	Acquire skills and techniques in handling drawing instrument, equipment and materials.	<ul style="list-style-type: none"> • Identify the various drawing instruments, equipment and materials • State the uses of drawing instruments, equipment
2	Types of Lines and uses	Recognise the importance of lines in technical drawing	<ul style="list-style-type: none"> • Identify the various types of lines • State the application of each line • Differentiate between perpendicular and parallel line
3	Division of lines	Understand the need to divide a given line	<ul style="list-style-type: none"> • Divide line into a number of equal parts • Divide a line into given proportion and ratios • Apply division of lines in scale construction, enlargement and reduction.
4	Construction and properties of circles	Acquire knowledge and skill in plane geometry	<ul style="list-style-type: none"> • Identify various parts and properties of a circle • Explain the relationships between centres, normal and tangent • Explain tangent and it properties
5	Construction and measurement of angles	Acquire the skill for constructing/measuring different angles	<ul style="list-style-type: none"> • Identify different angles • Bisect or trisect angles • Measure angles with the protractor
6	Properties and construction of polygons	Acquire knowledge and skill in plane geometry	<ul style="list-style-type: none"> • Define polygons • Identify by names the different polygons, triangles and quadrilaterals • Construct regular/irregular polygons

7	Construction of conic sections	Acquire knowledge and skill in plane geometry	<ul style="list-style-type: none"> • Define ellipse, parabola and hyperbola • Identify the importance of ellipse, parabola and hyperbola • Explain the practical application of ellipse, parabola and hyperbola
8	Loci	Recognise different types of loci	<ul style="list-style-type: none"> • Identify common loci • Explain locus • Construct different types of loci
9	Pictorial drawing	Develop knowledge and skill for drawing three dimensional objects	<ul style="list-style-type: none"> • Identify type of pictorial drawings • Explain isometric, oblique and perspective drawings and their principles
10	Orthographic projection	Develop knowledge and skill for converting three dimensional objects into orthographic drawings	<ul style="list-style-type: none"> • Explain orthographic projection • Distinguish between first and third angle orthographic projection • Draw objects in first and third angle orthographic projection
11	Surface development	Acquire the skill for developing solid objects.	<ul style="list-style-type: none"> • Outline the importance of surface development. • Construct the surface development of right and oblique solids • Construct the surface development for frustum of solids.
12	Forces and framed structures	Recognise the forces that act on structures	<ul style="list-style-type: none"> • Explain force as a vector quantity • Identify parallel and concurrent forces • Determine the reactions for framed structures
13	Conventional symbols	Recognize basic conventional symbols and	<ul style="list-style-type: none"> • Identify the conventional representation of some materials

		tools	<ul style="list-style-type: none"> • Identify common tools in the field of technical • Sketch conventional representation of materials
14	Computer Aided design(CAD)	Acquire knowledge and skill in computer aided design(CAD)	<ul style="list-style-type: none"> • Explain the term AutoCAD • Outline the importance of AutoCAD • Examine the various symbols used in AutoCAD • Select basic templates for drawing simple objects.
15	Sectioning	Acquire knowledge and skill in sectioning objects	<ul style="list-style-type: none"> • Explain and differentiate between types of sectioning • State the importance of sections in engineering • Draw sectional views of components

TEST BLUE PRINT/SPECIFICATION

TECHNICAL DRAWING

	Content Areas	Course Objectives/Outcomes(Depth Of Knowledge)				Total
		Level 1 (Recall)	Level 2 (Skill/Concept)	Level 3 (Strategic Thinking)	Level 4 (Extended Thinking)	
1.	Drawing instruments, equipment and Materials	1	2	2	2	7
2.	Types of lines and uses	1	2	2	3	8
3.	Division of lines	1	2	1	2	6
4.	Construction and properties of circles	1	2	2	1	6
5.	Construction and measurement of angles	1	2	3	4	10
6.	Properties and construction of polygons	1	1	2	3	7
7.	Construction of conic sections	1	2	2	1	6
8.	Loci	1	1	2	3	7
9.	Pictorial drawing	1	1	3	3	8
10.	Orthographic projection	1	2	2	1	6
11.	Surface development	1	1	2	1	5

12.	Forces and framed structures	1	2	2	1	6
13.	Conventional symbols	1	3	3	3	10
14.	Computer-aided design	1	1	1	1	4
15.	Sectioning	1	1	1	1	4
	TOTAL	15%	25%	30%	30%	100%