

**First Terminal Examination 2083**

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set	➤ Word problems related to two sets , three sets and Venn-diagram	8	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
2	Arithmetic	➤ Compound interest(annual at most 3 years, semiyearly at most 2 years and quarterly at most 1 year) ➤ Growth and Depreciation	13	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Visit bank/village ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
3	Mensuration	➤ <b>Pyramid</b> - Introduction, Surface area and Volume of square based pyramid. ➤ <b>Cone</b> - Introduction, Surface area and Volume	10	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
4	Algebra	➤ <b>Sequence and Series</b> (Arithmetic Sequence, Arithmetic means, Sum of n terms of an Arithmetic Series) ➤ Exponential Equations	8	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
5	Geometry	➤ <b>Area of Triangle and quadrilateral</b> • Diagonal divides the parallelogram into two equal halves . • Parallelograms standing on same base and between same parallels are equal in area. • Area of triangle is half of the area of parallelogram standing on the same base and between the same parallels • Triangles on the same base and between the same parallels are equal in area. ➤ <b>Construction</b> • Construction of triangle whose area is equal to the area of the given triangle • Construction of parallelogram whose area is equal to the area of the given parallelogram	13	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
6	Statistics	➤ Arithmetic Mean	3	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work	

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						➤ Exam	
7	Trigonometry	➤ Height and Distance (either angle of elevation or angle of depression is given)	5	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
		Total ETP	60				

**Specification Grid****First term: 2083****Subject: C.Mathematics****Class: 10****Time : 3hrs****Full Marks: 75**

S.N.	Content	Types of Question				total no. of items	total no. of question	Total Marks
		K	C	A	HA			
1.	Sets	1	1	1	1	4	1	6
2.	Arithmetic	2	2	3	2	9	3	15
3.	Mensuration	2	2	3	2	9	3	14
4.	Algebra	2	3	3	2	10	4	17
5.	Geometry	2	3	2	2	9	3	13
6.	Statistics	1	1	1	1	4	1	6
7.	Trigonometry	1	1	1	1	4	1	4
Total		11	13	14	11	49	16	75

**Mid-Terminal Examination 2083**

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set						
2	Arithmetic	➤ Money and Exchange Rate	6	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test/Unit test ➤ practical ➤ Project work/field work ➤ Exam	
3	Mensuration	➤ Surface area and volume of some 3-D shapes review ➤ Combination of prism and pyramid ➤ Combination of Squared based Pyramids ➤ Combination of hemisphere and cylinder ➤ Combination of Cylinder and cone ➤ Combination of cones	9	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test/Unit test ➤ practical ➤ Project work/field work ➤ Exam	
4	Algebra	➤ Geometric Sequence, Means, sum of n terms of geometric series and relation between A.M and G.M ➤ Rational Expression  ➤ Solving Quadratic Equation by factorization, completing square and using formula ( <b>Except verbal problem</b> )	10	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test/Unit test ➤ practical ➤ Project work/field work ➤ Exam	
5	Geometry	➤ <b>Circle</b> • Definition of terms related to circle. • Theorem related to arcs and the angles subtended by them • Theorem based on the angles subtended by the same arc. • Theorems based on cyclic quadrilateral ➤ <b>Construction</b> • Construction of parallelogram whose area is equal to the given triangle • Construction of triangle whose area is equal to the given parallelogram.	17	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis ➤ Problem solving		➤ oral test/Unit test ➤ practical ➤ Project work/field work ➤ Exam	
6	Statistics	➤ Median and Quartiles	6	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Problem solving		➤ oral test/Unit test ➤ practical ➤ Project work/field work ➤ Exam	
7	Probability	➤ Addition law of probability ➤ Dependent and independent events ➤ Multiplication law of	8	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Synthesis		➤ oral test/Unit test ➤ practical ➤ Project work/field work	

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		probability ➤ Probability tree diagram		➤ Problem solving		➤ Exam	
<b>8</b>	Trigonometry						
		Total ETP	56				

**Specification Grid****Mid-term: 2083****Subject: C.Mathematics****Class: 10****Time : 3hrs****Full Marks: 75**

S.N.	Content	Types of Question				total no. of items	total no.of questio n	Total Marks
		K	C	A	HA			
<b>1.</b>	<b>Sets</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>6</b>
<b>2.</b>	<b>Arithmetic</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>9</b>	<b>3</b>	<b>13</b>
<b>3.</b>	<b>Mensuration</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>13</b>
<b>4.</b>	<b>Algebra</b>	<b>2</b>	<b>2</b>	<b>3</b>	<b>1</b>	<b>8</b>	<b>3</b>	<b>15</b>
<b>5.</b>	<b>Geometry</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>3</b>	<b>13</b>
<b>6.</b>	<b>Statistics and Probability</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>2</b>	<b>8</b>	<b>2</b>	<b>11</b>
<b>7.</b>	<b>Trigonometry</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>4</b>	<b>1</b>	<b>4</b>
<b>Total</b>		<b>12</b>	<b>12</b>	<b>14</b>	<b>11</b>	<b>49</b>	<b>16</b>	<b>75</b>

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set						
2	Arithmetic						
3	Mensuration	➤ Cost Estimation	5	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Syntheses ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
4	Algebra	➤ <b>Quadratic Equation</b> • Application of quadratic equation(verbal problem)	6	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Syntheses ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
5	Geometry	➤ <b>Construction</b> • Construction of quadrilateral and triangle having equal areas.	7	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Syntheses ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
6	Statistics	➤ Mode of continuous data ➤ Range of continuous data ➤ Relationship between Mean, Median and Mode	8	➤ Question/Answer ➤ Demonstration ➤ Practical work ➤ Analysis/Syntheses ➤ Problem solving		➤ oral test ➤ Unit test ➤ practical ➤ Project work/field work ➤ Exam	
7	Probability and Trigonometry						
8							
		Total ETP	26				

**Specification Grid**  
**Pre-Qualifying Exam: 2083**  
**Subject: C.Mathematics**

Class: 10

Time : 3hrs

Full Marks: 75

SN	Area	Knowledge		Understanding		Application		Higher Ability		Total no .of items	Total no. of question	Total marks
		No. of item	Marks	No .of item	Marks	No. of item	Marks	No.of item	Marks			
1	Set	1	1	1	1	1	3	1	1	4	1	6
2	Arithmetic	2	2	2	3	3	5	2	3	9	3	13
3	Mensuration	2	2	2	3	2	5	2	3	8	3	13
4	Algebra	2	2	2	4	3	7	1	2	8	3	15
5	Geometry	2	2	2	3	2	5	2	3	8	3	13
6	Statistics and probability	2	2	2	3	2	4	2	2	8	2	11
7	Trigonometry	1	1	1	1	1	1	1	1	4	1	4
Total		12	12	12	18	14	30	11	15	49	16	75