SYLLABUS 2080　　　　C. Mathematics　　　　Class: 10

First Terminal Examination

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(Maximum 2 years for C.I half yearly 3 for yearly) ➢ Population growth and compound depreciation	14	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Visit bank/village ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
3	Mensuration	➢ Pyramid- Introduction, Surface area and Volume of square based pyramid.	8	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
4	Algebra	➢ Sequence and Series (Arithmetic Sequence , Arithmetic means, Sum of n terms of an Arithmetic Series) ➢ Rational Expression	10	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
5	Geometry	➢ Area of Triangle and quadrilateral • Diagonal divides the parallelogram into two equal halves (Theorem 1) • Parallelograms standing on same base and between same parallels are equal in area. (Theorem 2)	5	➢ 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 ➢ Exam	
7	Trigonometry	➢ Height and Distance	5	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	

SYLLABUS 2080 **C. Mathematics** **Class: 10**
First term
Subject: Mathematics **Class: 10** **Full Marks: 75** **Time : 3hrs**
Specification Grid

Area	Content	Types of Question				total no.of items	total no.of quest ion	Total Marks	Total Time
		K	C	A	HA				
Set	➤ Word problems related to two sets , three sets and Venn-diagram	1	1	1	1	4	1	6	**14min**
Arithmetic	➤ Compound interest(Maximum 2 years for C.I half yearly 3 for yearly) ➤ Population growth and compound depreciation	2	2	3	2	9	3	15	**36min**
Mensuration	➤ Pyramid- Introduction, Surface area and Volume of square based pyramid.	2	2	2	2	8	3	13	**32min**
Algebra	➤ Sequence and Series (Arithmetic Sequence , Arithmetic means, Sum of n terms of an Arithmetic Series) ➤ Rational Expression	2	3	3	2	10	4	20	**48min**
Geometry	➤ Area of Triangle and quadrilateral	2	2	2	2	8	3	15	**36min**
Trigonometry	➤ Height and Distance	1	1	1	1	4	1	6	**14min**
Total		**10**	**11**	**12**	**10**	**33**	**15**	**75**	**180min**

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set						
2	Arithmetic	➢ Money and Money Exchange	8	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
3	Mensuration	➢ Cone- Introduction, Surface area and Volume ➢ Surface area and volume of some 3-D shapes review ➢ Combination of prism and pyramid ➢ Combination of Squared based Pyramids	10	➢ 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 ➢ Exponential Equations	10	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	

5	Geometry	➢ Area of triangle and quadrilateral
		  • Area of triangle is half of the area of parallelogram standing on the same base and between the same parallels (Theorem-3)
		  • Triangles on the same base and between the same parallels are equal in area. (Theorem-4)
		➢ Circle
		  • 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.
			20	➢ Question/Answer
				➢ Demonstration
				➢ Practical work
				➢ Analysis/Synthesis
				➢ Problem solving
						➢ oral test
						➢ Unit test
						➢ practical
						➢ Project work/field work
						➢ Exam	

6	Statistics	➢ Median and Quartiles	8	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
7							

SYLLABUS 2080   **C. Mathematics**   **Class: 10**

Subject: Mathematics   **Class: 10**   **Full Marks: 75**   **Time : 3hrs**

Specification Grid

Area	Content	Types of Question				total no.of items	total no.of question	Total Marks	Total Time
		K	**C**	**A**	**HA**				
Set	➢ Word problems related to two sets , three sets and Venn-diagram	1	1	1	1	4	1	6	14min
Arithmetic	➢ Compound interest(Maximum 2 years for C.I half yearly 3 for yearly) ➢ Population growth and compound depreciation ➢ Money and Money Exchange	2	2	3	2	9	3	15	36min
Mensuration	➢ Pyramid- Introduction, Surface area and Volume of square based pyramid. ➢ Cone- Introduction, Surface area and Volume ➢ Surface area and volume of some 3-D shapes review ➢ Combination of prism and pyramid ➢ Combination of Squared based Pyramids	2	2	2	2	8	3	13	32min
Algebra	➢ Sequence and Series (Arithmetic Sequence , Arithmetic means, Sum of n terms of an Arithmetic Series) ➢ Rational Expression Geometric Sequence, Means, sum of n terms of geometric series and relation between A.M and G.M ➢ Exponential Equations	2	2	2	2	8	3	14	34min
Geometry	➢ Area of Triangle and quadrilateral ➢ Circle	2	2	2	2	8	3	15	36min
Trigonometry	➢ Height and Distance	1	1	1	1	4	1	6	14min
Statistics	➢ Median and Quartiles	1	1	1	1	4	1	6	14min
Total		11	11	12	11	45	15	75	180min

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set						
2	Arithmetic						
3	Mensuration	➢ Combination of hemi-sphere and cylinder ➢ Combination of Cylinder and cone ➢ Combination of cones ➢ Mensuration in household activities	10	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	

4	Algebra	➢ Quadratic Equations
		   • Solution of Quadratic equation
		   • Application of quadratic equation
			8	➢ Question/Answer
				➢ Demonstration
				➢ Practical work
				➢ Analysis/Synthesis
				➢ Problem solving
						➢ oral test
						➢ Unit test
						➢ practical
						➢ Project work/field work
						➢ Exam	

5	Geometry	➢ Circle • Theorems based on cyclic quadrilateral ➢ Construction of triangle and quadrilaterals having equal areas	15	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ 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	7	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
7	Probability	➢ Definition of basic terms on probability ➢ Mutually exclusive and Non-mutually exclusive events ➢ Law of addition of mutually exclusive events ➢ Dependent and independent events ➢ Multiplication law of probability ➢ Probability tree diagram	8	➢ Question/Answer ➢ Demonstration ➢ Practical work ➢ Analysis/Synthesis ➢ Problem solving		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
8	Trigonometry						

SYLLABUS 2080   **C. Mathematics**   **Class: 10**

Mid- term

Subject: Mathematics   **Class: 10**   **Full Marks: 50**   **Time : 3hrs**

Specification Grid

SN	Area	knowledge		Understanding		Application		Higher ability		Total no.of items	Total no.of question	Total marks	Total time (min)
		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	14
2	Arithmetic	2	2	2	3	3	5	2	3	9	3	13	31
3	Mensuration	2	2	2	3	2	5	2	3	8	3	13	31
4	Algebra	2	2	2	4	3	7	1	2	8	3	15	36
5	Geometry	2	2	2	3	2	5	2	3	8	3	13	31
6	Statistics and probability	2	2	2	3	2	4	2	2	8	2	11	27
7	Trigonometry	1	1	1	1	1	1	1	1	4	1	4	10
Total		12	12	12	18	14	30	11	15	49	16	75	180