First Terminal Examination

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set	➢ Set review ➢ Notation of set ➢ Method of describing sets ➢ Cardinal number of sets ➢ Types of set ➢ Relationship between sets ➢ Representation of set in Venn-diagram ➢ Universal sets, sub-sets, proper sub-sets, Improper sub-sets and No.of subsets.	7	➢ Question/Answer ➢ Demonstration ➢ Analysis/synthesis ➢ Practical		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
2	Arithmetic	➢ Number System in different Bases • Conversion of numbers ➢ Real Numbers • Types of Numbers • Sign rule of addition, subtraction, multiplication and division	12	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
3	Mensuration	➢ Area and Perimeter of plane figure (Triangle, Quadrilateral and Circle)	12	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
4	Geometry	➢ Angle • Angles and parallel line • Types of angles (Vertically opposite angles, adjacent angle, complementary angle and supplementary angle) • Types of angles (Alternate angle, co-interior angle, corresponding angle)	15	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research ➢ Practical		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
5	Algebra	➢ Algebraic terms and expression ➢ Polynomial and degree of polynomials ➢ Evaluation of algebraic expressions ➢ Special products and formulae	8	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
6	Statistics	➢ Collection of data ➢ Frequency table ➢ Cumulative frequency table ➢ Graphical representation of data	7	➢ Question answer ➢ Demonstration ➢ Problem solving Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
7	Transformation						
8	Co-ordinate						

Area	Content	Types of Question				Total no.of items	total no.of questions	Total Marks	Total Time
		K	**C**	**A**	**HA**				
Set	**Sets**	1	1	1	1	4	1	4	10min
Arithmetic	➢ Number System in different Bases ➢ Real Numbers	2	1	2	1	6	2	10	24min
Mensuration	➢ Area and Perimeter of plane figure	2	2	1	1	6	2	10	24min
Geometry	➢ Angle	1	2	2	1	6	3	10	24min
Algebra	➢ Algebraic terms and expression ➢ Special products and formulae	1	2	1	2	6	2	8	19min
Statistics	➢ Collection of data ➢ Frequency table ➢ Cumulative frequency table ➢ Graphical representation of data	2	2	1	1	6	2	8	19min
total		9	10	8	7	34	12	50	120min

Mid Terminal Examination

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set						

2	Arithmetic	➢ Real Numbers
		  • Terminating and non-terminating decimal
		  • Comparison between rational and irrational number
		  • Real Number
		  • Scientific notation
		➢ Ratio and proportion
		  • comparison of quantities of same kind
		  • compounded ratio
		  • Proportion
		  • types of proportion
			12	➢ Question answer
				➢ Demonstration
				➢ Problem solving
				➢ Research
						➢ oral test
						➢ Unit test
						➢ practical
						➢ Project work/field work
						➢ Exam	

3	Mensuration	➢ Area and volume of solid	8	➢ Question answer ➢ Demonstration ➢ Problem solving Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	

4	Geometry	➢ Tringle
		  • Experimental verification of properties of triangle
		  • Congruent triangle
		  • Experiment on condition of congruency
		  • Similar triangle
		  • Condition of similarity
			14	➢ Question answer
				➢ Demonstration
				➢ Problem solving
				Research
						➢ oral test
						➢ Unit test
						➢ practical
						➢ Project work/field work
						➢ Exam	

5	Algebra	➢ Factors and factorization ➢ H.C.F and L.C.M ➢ Laws of indices	15	➢ Question answer ➢ Demonstration ➢ Problem solving Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	

6	Statistics	➢ Measures of central tendency
		  • Arithmetic mean
		  • Meadian
		  • Mode
		  • Quartile
		  • Range
			10	➢ Question answer
				➢ Demonstration
				➢ Problem solving
				Research
						➢ oral test
						➢ Unit test
						➢ practical
						➢ Project work/field work
						➢ Exam	

7	Transformation	➢ Reflection of Geometrical figure	7	➢ Question answer ➢ Demonstration ➢ Problem solving Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
8	Co-ordinate						

SYLLABUS 2080   **C. Mathematics**   **Class: 8**
Mid- term
Subject: Mathematics   **Class: 8**   **Full Marks: 50**   **Time : 2hrs**
Specification Grid

Area	Content	Types of Question				total no.of items	total no.of questions	Total Marks	Total Time
		K	**C**	**A**	**HA**				
Set	Set	1	1	1		3	1	3	7min
Arithmetic	➤ Real Numbers ➤ Ratio and proportion ➤ Number System in different Bases	2	2	1	1	6	2	10	24min
Mensuration	➤ Area and volume of solid ➤ Area and Perimeter of plane figure	1	1	1	1	4	1	6	14min
Geometry	➤ Angle ➤ Tringle	2	2	2	1	7	3	15	36min
Algebra	➤ Factors and factorization ➤ H.C.F and L.C.M ➤ Laws of indices	2	1	2	1	6	3	10	24min
Statistics	➤ Measures of central tendency ➤ Collection of data	1		1		4	1	3	7min
Transformation	➤ Reflection of Geometrical figure	1			1	2	1	3	8min
total		9	8	8	5	30	12	50	120min

Second Terminal Examination

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set						
2	Arithmetic	➢ Profit and loss ➢ Unitary method	10	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research ➢ Field visit		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
3	Mensuration	➢ Solid and their nets	3	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work ➢ Exam	
4	Geometry	➢ Quadrilateral and regular polygon	8	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
5	Algebra	➢ Equation and Graph • Linear equation with one variable and their solution • Linear equation with two variable and their solution • Simultaneous equation, solving method and application • Quadratic equation, solving by factorization method	12	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
6	Statistics						
7	Transformation	➢ Rotation of geometrical figure	4	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
8	Co-ordinate	➢ Pythagoras Theorem ➢ Pythagorean triples	7	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
9	Symmetry, Design and Tessellation	➢ Symmetrical and asymmetrical shapes ➢ Line or axis of symmetry ➢ Tessellation and types of tessellation	2	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ practical ➢ Project work ➢ Exam	

Second-term

Subject: Mathematics   **Class: 8**   **Full Marks: 50**   **Time : 2hrs**

Specification Grid

Area	Content	Types of Question				total no.of items	total no.of questions	Total Marks	Total Time
		K	**C**	**A**	**HA**				
Set	Set	1	1	1		3	1	3	7min
Arithmetic	➢ Real Numbers ➢ Ratio and proportion ➢ Number System in different Bases ➢ Profit and loss ➢ Unitary method	2	2	1	1	6	2	10	24min
Mensuration	➢ Area and volume of solid ➢ Area and Perimeter of plane figure ➢ Solid and their nets	1	1	1	1	4	1	6	14min
Geometry	➢ Angle ➢ Tringle ➢ Quadrilateral and regular polygon	2	2	2	1	7	3	12	30min
Algebra	➢ Factors and factorization ➢ H.C.F and L.C.M ➢ Laws of indices ➢ Equation and Graph	2	1	2	1	6	3	10	24min
Statistics	➢ Measures of central tendency ➢ Collection of data	1		1		2	1	3	7min
Transformation and Co-ordinate	➢ Rotation of geometrical figure ➢ Reflection of Geometrical figure ➢ Pythagoras Theorem	2	1		1	4	1	6	14min
total		9	8	8	5	30	12	50	120min

Annual Examination

Unit	Topics	Content	TP	Teaching Method	Teaching Material	Evaluation	R
1	Set						
2	Arithmetic	➢ Simple Interest	7	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
3	Mensuration	➢ Revision					
4	Geometry	➢ Revision					
5	Algebra	➢ Rational Expression • Reduction of rational expression to their lowest term • Multiplication, division, Addition and subtraction of rational expression.	10	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
6	Statistics						
7	Transformation	➢ Displacement of geometrical shapes	4	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
8	Co-ordinate	➢ Distance between two points	5	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	
9	Symmetry, Design and Tessellation						
10	Bearing and Scale drawing	➢ Scale Drawing -Review	4	➢ Question answer ➢ Demonstration ➢ Problem solving ➢ Research		➢ oral test ➢ Unit test ➢ practical ➢ Project work/field work ➢ Exam	

Subject: Mathematics   **Class: 8**   **Full Marks: 50**   **Time : 2hrs**

Specification Grid

Area	Content	Types of Question				total no.of items	total no.of questions	Total Marks	Total Time
		K	**C**	**A**	**HA**				
Set	Set	1	1	1		3	1	3	**8min**
Arithmetic	➢ Real Numbers ➢ Ratio and proportion ➢ Number System in different Bases ➢ Profit and loss ➢ Unitary method ➢ Simple Interest	2	3	3	2	10	3	12	**28min**
Mensuration	➢ Area and volume of solid ➢ Area and Perimeter of plane figure ➢ Solid and their nets	1	1	1	1	4	1	5	**12min**
Geometry	➢ Angle ➢ Triangle ➢ Quadrilateral and regular polygon	1	2	1	1	5	2	10	**24min**
Algebra	➢ Factors and factorization ➢ H.C.F and L.C.M ➢ Laws of indices ➢ Equation and Graph ➢ Rational Expression	2	1	2	1	6	3	10	**24min**
Statistics	➢ Measures of central tendency ➢ Collection of data	1		1		2	1	3	**7min**
Transformation and Co-ordinate	➢ Rotation of geometrical figure ➢ Reflection of Geometrical figure	1	2	1	1	5	2	7	**17min**
total		9	8	8	5	30	12	50	**120min**

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**

Mid-Terminal Examination

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							

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