MATHEMATICS
For Class IX (marks 75)

1. **Sets**
   o Revision of the work done in the previous classes, Exercises
   o Notation of Sets, Exercises
   o Operations on Sets; their properties and Venn-Diagram, Exercises
   o Cartesian product, Exercises
   o Binary Relations
   o Functions, Exercises
   o Cartesian plane, Exercises

2. **System of Real Numbers**
   o Revision of the work done in the previous classes, Exercises
   o Irrational Numbers
   o Properties of real numbers, Exercises
   o Surds, Exercises
   o Power of real numbers with exponents as Natural Number, Exercises
   o Power of Real Numbers, Exercises

3. **Logarithms**
   o Scientific Notation, Exercises
   o Introduction, Exercises
   o Common Logarithms, Exercises
   o Laws of Logarithms

4. **Algebraic Expressions**
   o Revision of work done in the previous classes, Exercises
   o Division, Exercises
   o Formulas

5. **Factorization, H.C.F, L.C.M, simplification and Square Roots**
   o Revision of the work done in the previous classes, Exercises
   o Factorization, Exercises
   o H.C.F. and L.C.M., Exercises
   o Simplification, Exercises
   o Square Root, Exercise

6. **Matrices**
   o Introduction, Exercises
   o Kinds of Matrices, Exercises
   o Addition and Subtraction of matrices, Exercises
   o Multiplication of Matrices, Exercises
   o Multiplicative Inverse of a Matrix, Exercises
   o Solution of two simultaneous Linear Equations using Matrices, Exercises

7. **Fundamental Concepts of Geometry**
   o Revision of the work done in the previous classes, Exercises
   o Definitions, Exercises
   o Postulates, Exercises
   o Deductive Reasoning
   o Theorems of Geometry
   o Types of Proofs, Exercises

8. **Demonstrative Geometry**
   o Theorems, Exercise after every theorem

9. **Practical Geometry**
   o Revision of the work done in the previous classes, Exercises
   o Constructions, Exercises

RECOMMENDED REFERENCE BOOKS FOR CLASS IX

The question paper will be syllabus oriented. However, the following books are recommended for reference and supplementary reading:

1. Mathematics
   Punjab Textbook Board, Lahore
2. Mathematics
   National Book Foundation, Islamabad
3. Mathematics
   Sindh Textbook Board, Jamshoro
4. Mathematics
   NWFP Textbook Board, Peshawar
5. Mathematics
   Baluchistan Textbook Board, Quetta