<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>NO. OF QUESTION</th>
<th>MARKS ALLOTED</th>
<th>TIME (in mins)</th>
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<tbody>
<tr>
<td><strong>Sets</strong></td>
<td>LA 1</td>
<td>5</td>
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<tr>
<td>Relations &amp; Functions</td>
<td>SA 2</td>
<td>8</td>
<td>18</td>
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<tr>
<td>Trigonometric Functions</td>
<td>VSA 2</td>
<td>4</td>
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<tr>
<td><strong>ALGEBRA</strong></td>
<td>MCQ 1</td>
<td>1</td>
<td>35</td>
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<tr>
<td>Principle of Mathematical</td>
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<tr>
<td>Induction</td>
<td>LA 2</td>
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<td>Complex No. &amp; Quadratic Equ.</td>
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<td>25</td>
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<td>Linear Inequalities</td>
<td>VSA 2</td>
<td>4</td>
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<tr>
<td>Permutation &amp; combination</td>
<td>MCQ 3</td>
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<tr>
<td>Binomial theorem</td>
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<tr>
<td>Sequence &amp; Series</td>
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<td><strong>ALGEBRA</strong></td>
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<tr>
<td>Straight Lines</td>
<td>LA 1</td>
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<td>Conic sections</td>
<td>SA 2</td>
<td>8</td>
<td>40</td>
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<td>Introduction to 3-D Geo.</td>
<td>VSA 1</td>
<td>2</td>
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<td><strong>Limits &amp; Derivatives</strong></td>
<td>MCQ 2</td>
<td>2</td>
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<td><strong>Mathematical Reasoning</strong></td>
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<tr>
<td><strong>Statistics</strong></td>
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<td>Probability</td>
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<td><strong>TOTAL</strong></td>
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MCQ – 10 x 1 = 10 (total 15 questions)
VSA – 7 x 2 = 14 (total 14 questions)
SA – 9 x 4 = 36 (total 16 questions)
LA – 4 x 5 = 20 (total 10 questions)
80 (total 55 questions)
1. **Group A (MCQ) [1 X 10 = 10]**
   a) Sets or Trigonometric
   b) Algebra
   c) Algebra
   d) Algebra or Algebra
   e) Geometry
   f) Geometry or Geometry
   g) Limits
   h) Limits or Derivatives
   i) Probability
   j) Probability / Statistics

2. **Group B (VSAQ) [Each questions carries 2 marks]**
   a) (2 out of 4) [2 X 2 = 4]
      i) Set
      ii) Relation or mapping
         iii) Trigonometry (associated; compd; angles; sum, prod; multiple & sub multiple angles)
         iv) Trigonometry (general solution / properties of triangle) Two chapters
            (general solution & properties of triangle) are to be covered either in 2a(v) & 3a(iii)
   b) (2 out of 4) [2 X 2 = 4]
      - i) Complex numbers
      - ii) permutation and combination
         iii) binomial theorem
      iv) AP/GP/Infinite GP [3 chapters (A.P & G.P & Infinite G.P) are to be covered in either of questions 2b(v); 3b(v); 4b(iv)]
   c) (1 out of 2) [1 X 2 = 2]
      i) straight line
      ii) Analytical3-D Geometry
   d) (1 out of 2) [2 X 1 = 2]
      i) limit
      ii) derivatives
   e) (1 out of 2) [2 X 1 = 2]
      i) Probability
      ii) Statistics

3. **Group C (SAQ) [Each questions carries 4 marks]**
   a) (2 out of 3) [2 X 4 = 8]
      i) Set / Relation / mapping
      ii) Associated; comp; angles; sum, prod; multiple & sub multiple angles
iii) General solution / properties of triangle [Two chapters (general solution & properties of triangle) are to be covered either in 2a(v) & 3a(iii)]

b) (2 out of 5) [2 X 4 = 8]
   i) mathematical induction
   ii) complex number
   iii) permutation and combination
   iv) binomial theorem
   v) sequence & series (AP/GP/Institute GP) [3 chapters (A.P & G.P & Infinite G.P) are to be covered in either of questions 2b(v); 3b(v); 4b(iv)]

c) (2 out of 3) [2 X 4 = 8]
   i) straight line
   ii) straight line
   iii) circle

d) (1 out of 2) [1 X 4 = 4]
   i) limit
   ii) derivatives

e) (1 out of 2) [1 X 4 = 4]
   i) mathematical reasoning
   ii) mathematical reasoning

f) (1 out of 2) [1 X 4 = 4]
   i) Probability
   ii) Statistics

4. Group D (LAQ) [Each questions carries 5 marks]

a) (1 out of 2) [1 X 5 = 5]
   i) Trigonometry
   ii) Trigonometry

b) (2 out of 4) [2 X 5 = 10]
   i) inequality (with graph)
   ii) quadratic equation & complex numbers
   iii) permutation and combination
   iv) sequence & series (AP/GP/Institute GP) [3 chapters (A.P & G.P & Infinite G.P) are to be covered in either of questions 2b(v); 3b(v); 4b(iv)]

c) (1 out of 3) [1 X 5 = 5]
   i) parabola / ellipse / hyperbola
   ii) parabola / ellipse / hyperbola
   iii) parabola / ellipse / hyperbola

\{ one question from each chapters. \}
PROJECT -20 Marks

Section: A (compulsory) 10 Marks

1. Statistics: Use of graphs, different types of graphical representation, inference about data from the graphs.

OR

2. Curve tracing with reference to algebraic, trigonometric and greatest integer function, sigma function.

Section: B 10 Marks
Any one of the following

1. Project on concept of limit.
2. Project on history, development and/or application of complex numbers contribution of mathematics in the relevant fields with a historical approach.
3. Use of algebra in investment planning with various forms of investment and formulas for calculating interest on savings.
4. Project on properties and application of parabola, ellipse.

MARKS DIVISION

PRESENTATION: 5+5=10
LAB. NOTE BOOK: 3+3=6
VIVA-VOCE: 2+2=4