

DESIGN OF QUESTION PAPER

Subject : **MATHEMATICS**
 Class : XI
 Full Mark : 100
 Time : 3 Hours

| WEIGHTAGE TO OBJECTIVES: | | | | | | |
|---------------------------------|---|----------------------------|--|------------|------------|------------|
| | Objectives | Marks | Percentage | | | |
| I | Knowledge(K) | 20 | 20 | | | |
| | Understanding (U) | 46 | 46 | | | |
| | Application (A) | 30 | 30 | | | |
| | Skill (S) | 4 | 4 | | | |
| | Total: | 100 | 100 | | | |
| | WEIGHTAGE TO FORMS OF QUESTIONS: | | | | | |
| | FORM OF QUESTIONS | No. of questions | Time(in minutes) | Marks | Percentage | |
| II | Essay/Long Ans: (E/LA) | 6 | 65 | 36 | 36 | |
| | Short Answer (SA-I) | 8 | 58 | 32 | 32 | |
| | Short Answer (SA-II) | 9 | 32 | 18 | 18 | |
| | Very Short Answer(VSA) | 10 | 18 | 10 | 10 | |
| | MCQ | 4 | 7 | 4 | 4 | |
| | Total: | 37 | 180 | 100 | 100 | |
| | WEIGHTAGE TO CONTENT: | | | | | |
| | Unit | CONTENTS : | | Marks | Percentage | |
| III | I | 1.1 | Sets, Relations and Functions | | 13 | 13 |
| | | 1.2 | Trigonometric functions | | 16 | 16 |
| | II | 2.1 | Complex Numbers, Quadratic Equations and Linear Inequalities | | 13 | 13 |
| | | 2.2 | Permutations & Combinations, Mathematical Induction and Binomial Theorem | | 15 | 15 |
| | | 2.3 | Sequence and Series | | 9 | 9 |
| | III | 3.1 | Straight lines | | 6 | 6 |
| | | 3.2 | Circle, Conic Section and Introduction to Three dimensional Geometry | | 7 | 7 |
| | IV | 4.1 | Limits and Derivatives | | 6 | 6 |
| | V | 5.1 | Mathematical Reasoning | | 3 | 3 |
| | VI | 6.1 | Statistics and Probability | | 12 | 12 |
| | Total: | | | | 100 | 100 |
| | IV | SCHEME OF SECTIONS: | | NIL | | |
| V | SCHEME OF OPTIONS: | | Internal option in any two SA-I Type and in any Three Essay Type. | | | |
| VI | DIFFICULTY LEVEL : | | | | | |
| | Difficulty: | | | 30% | | |
| | Average: | | | 50% | | |
| | Easy: | | | 20% | | |

DESIGN OF QUESTION PAPER

Subject : **MATHEMATICS**
Class : XII
Full Mark : 100
Time : 3 Hours

| | | | | | | |
|---------------------------|---|----------------------------|---|------------|------------|------------|
| I | WEIGHTAGE TO OBJECTIVES: | | | | | |
| | Objectives | | | Marks | Percentage | |
| | Knowledge(K) | | | 20 | 20 | |
| | Understanding (U) | | | 46 | 46 | |
| | Application (A) | | | 30 | 30 | |
| | Skill (S) | | | 4 | 4 | |
| | Total: | | | 100 | 100 | |
| II | WEIGHTAGE TO FORMS OF QUESTIONS: | | | | | |
| | FORM OF QUESTIONS | No. of questions | Time(in minutes) | Marks | Percentage | |
| | Essay/Long Ans: (E/LA) | 6 | 65 | 36 | 36 | |
| | Short Answer (SA-I) | 8 | 58 | 32 | 32 | |
| | Short Answer (SA-II) | 9 | 32 | 18 | 18 | |
| | Very Short Answer(VSA) | 10 | 18 | 10 | 10 | |
| | MCQ | 4 | 7 | 4 | 4 | |
| | Total: | 37 | 180 | 100 | 100 | |
| III | WEIGHTAGE TO CONTENT: | | | | | |
| | Unit | CONTENTS : | | | Marks | Percentage |
| | I | 1.1 | Relations and Functions | | 5 | 5 |
| | | 1.2 | Inverse Trigonometric Functions | | 5 | 5 |
| | II | 2.1 | Matrices | | 7 | 7 |
| | | 2.2 | Determinants | | 6 | 6 |
| | III | 3.1 | Continuity and Differentiability | | 10 | 10 |
| | | 3.2 | Applications of Derivatives | | 8 | 8 |
| | | 3.3 | Integrals | | 14 | 14 |
| | | 3.4 | Applications of Integral | | 4 | 4 |
| | | 3.5 | Differential Equation | | 8 | 8 |
| | IV | 4.1 | Vectors | | 8 | 8 |
| | | 4.2 | Three - dimensional Geometry | | 9 | 9 |
| | V | 5.1 | Linear Programming | | 6 | 6 |
| | VI | 6.1 | Probability | | 10 | 10 |
| | Total: | | | | 100 | 100 |
| | IV | SCHEME OF SECTIONS: | | NIL | | |
| V | SCHEME OF OPTIONS: | | Internal option in any two SA-I Type and in any Three Essay Type. | | | |
| DIFFICULTY LEVEL : | | | | | | |
| VI | Difficulty: | | 30% | | | |
| | Average: | | 50% | | | |
| | Easy: | | 20% | | | |