

## DESIGN OF THE QUESTION PAPER

### Mathematics

### Class X

**Time : 3 Hours**

**Maximum Marks : 80**

Weightage and the distribution of marks over different dimensions of the question shall be as follows:

**(A) Weightage to Content/ Subject Units :**

| S.No. | Content Unit               | Marks             |
|-------|----------------------------|-------------------|
| 1.    | Number Systems             | 04                |
| 2.    | Algebra                    | 20                |
| 3.    | Trigonometry               | 12                |
| 4.    | Coordinate Geometry        | 08                |
| 5.    | Geometry                   | 16                |
| 6.    | Mensuration                | 10                |
| 7.    | Statistics and Probability | 10                |
|       |                            | <b>Total : 80</b> |

**(B) Weightage to Forms of Questions :**

| S.No.        | Form of Questions | Marks for each Question | Number of Questions | Total Marks |
|--------------|-------------------|-------------------------|---------------------|-------------|
| 1.           | MCQ               | 01                      | 10                  | 10          |
| 2.           | SAR               | 02                      | 05                  | 10          |
| 3.           | SA                | 03                      | 10                  | 30          |
| 4.           | LA                | 06                      | 05                  | 30          |
| <b>Total</b> |                   |                         | <b>30</b>           | <b>80</b>   |

### (C) Scheme of Options

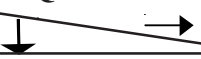
All questions are compulsory, i.e., there is no overall choice. However, internal choices are provided in one question of 2 marks, three questions of 3 marks each and two questions of 6 marks each.

### (D) Weightage to Difficulty Level of Questions

| S.No. | Estimated Difficulty Level of Questions | Percentage of Marks |
|-------|-----------------------------------------|---------------------|
| 1.    | Easy                                    | 20                  |
| 2.    | Average                                 | 60                  |
| 3.    | Difficult                               | 20                  |

**Note :** A question may vary in difficulty level from individual to individual. As such, the assessment in respect of each will be made by the paper setter/ teacher on the basis of general anticipation from the groups as whole taking the examination. This provision is only to make the paper balanced in its weight, rather to determine the pattern of marking at any stage.

**BLUE PRINT**  
**MATHEMATICS**  
**CLASS X**

| <b>Form of Question</b>                                                                                                            |               |              |               |              |               |
|------------------------------------------------------------------------------------------------------------------------------------|---------------|--------------|---------------|--------------|---------------|
| <b>Units</b>                                      | MCQ           | SAR          | SA            | LA           | Total         |
| <b>Number Systems</b>                                                                                                              | 2(2)          | 2(1)         | -             | -            | 4(3)          |
| <b>Algebra</b><br>Polynomials, Pair of<br>Linear Equations in<br>Two Variables,<br>Quadratic Equations,<br>Arithmetic Progressions | 3(3)          | 2(1)         | 9(3)          | 6(1)         | 20(8)         |
| <b>Trigonometry</b><br>Introduction to Trigonometry,<br>Some Applications of<br>Trigonometry                                       | 1(1)          | 2(1)         | 3(1)          | 6(1)         | 12(4)         |
| <b>Coordinate Geometry</b>                                                                                                         | 1(1)          | 4(2)         | 3(1)          | -            | 8(4)          |
| <b>Geometry</b><br>Triangles, Circles,<br>Constructions                                                                            | 1(1)          | -            | 9(3)          | 6(1)         | 16(5)         |
| <b>Mensuration</b><br>Areas related to Circles,<br>Surface Areas and Volumes                                                       | 1(1)          | -            | 3(1)          | 6(1)         | 10(3)         |
| <b>Statistics &amp; Probability</b>                                                                                                | 1(1)          | -            | 3(1)          | 6(1)         | 10(3)         |
| <b>Total</b>                                                                                                                       | <b>10(10)</b> | <b>10(5)</b> | <b>30(10)</b> | <b>30(5)</b> | <b>80(30)</b> |

**SUMMARY**

|                                                |                          |            |
|------------------------------------------------|--------------------------|------------|
| Multiple Choice Questions (MCQ)                | Number of Questions : 10 | Marks : 10 |
| Short Answer Questions<br>with Reasoning (SAR) | Number of Questions : 05 | Marks : 10 |
| Short Answer Questions (SA)                    | Number of Questions : 10 | Marks : 30 |
| Long Answer Questions (LA)                     | Number of Questions : 05 | Marks : 30 |
| <b>Total</b>                                   | <b>30</b>                | <b>80</b>  |