Maharashtra State Board of Secondary and Higher Secondary Education, Pune
Subject : Mathematics & Statistics (40)
Std. XII (Arts and Science)

Unit-wise distribution of marks.
Part I

Sr. No.	Chapter	Marks with Option
1.	Mathematical Logic	8
2	Matrices	6
3	Trigonometric Functions	10
4	Pair of Straight Lines	6
5	Vectors	12
6	Line and Plane	10
7	Linear Programming	4
8	Differentiation	9
9	Applications of Derivatives	9
10	Indefinite Integration	10
11	Definite Integration	6
12	Application of Definite Integration	4
13	Differential Equations	8
14	Probability Distributions	5
15	Binomial Distribution	5
	Total	**112**

Weightage to Learning Objectives

Sr. No.	Objectives	Total Weightage (With Option)	Percentage
1.	Knowledge	34 Marks	30 %
2.	Understanding	47 Marks	42 %
3.	Applications and skill	31 Marks	28 %
	Total	**112 Marks**	**100 %**

Difficulty level of question

Objectives	Total Weightage (With Option)	Percentage
Easy	34 Marks	30 %
Average	56 Marks	50 %
Difficult	22 Marks	20 %
Total	**112 Marks**	**100 %**

Weightage to Types of questions

Type of question	Marks for each	No of questions	Total Marks (with option)
MCQ	2 Marks each	Q.No. 1 (i to viii)	16 Marks
VSA	1 Mark each	Q.No. 2 (i to iv)	4 Marks
SA I	2 Marks each	Q.No. 3 to 14	24 Marks
SA II	3 Marks each	Q.No. 15 to 26	36 Marks
LA	4 Marks each	Q.No. 27 to 34	32 Marks
Total			**112 Marks**

Note :

The weightage to theory questions in question paper is up to 15% (i.e. up to 17 marks).

Format of Question Paper
(From Year 2021)
Annual Examination

Time : 3 Hours   **Total Marks - 80**

General Instructions:

The question paper is divided into FOUR sections.

1) **Section A**: Q:1 Contains **Eight** multiple choice questions carrying **Two** marks each.

   Q:2 Contains **Four** very short answer type questions carrying **One** mark each.

2) **Section B**: contains **Twelve** short answer type questions carrying **Two** marks each.

   (Attempt any **Eight**)

3) **Section C:** contains **Twelve** short answer type questions carrying **Three** marks each.

   (Attempt any **Eight)**

4) **Section D:** contains **Eight** long answer type questions carrying **Four** marks each.

   (Attempt any **Five**)

5) Use of log table is allowed. Use of calculator is **not** allowed.

6) Figures to the right indicate full marks.

7) Use of graph paper is not necessary. Only rough sketch of graph is expected.

8) For each MCQ, correct answer must be written along with its alphabet :

   e.g. (a)…… / (b)…… / (c)…… / (d)……   Only first attempt will be considered for evaluation.

9) Start answer to each section on a new page.

Section A

Q.No.1   Select and write the most appropriate answer from the given alternatives
for each sub-question: (2 marks each) [16]
(i) to (viii)   MCQ

Q.No.2   Answer the following questions :   (1 mark each) [04]
(i) to (iv)   VSA

Section B

Attempt any EIGHT of the following questions: (2 marks each) [16]
Q.No.3 to Q.No. 14   Short Answer - I

Section C

Attempt any EIGHT of the following questions: (3 marks each) [24]
Q.No.15 to Q.No. 26   Short Answer -II

Section D

Attempt any FIVE of the following questions: (4 marks each) [20]
Q.No.27 to Q.No. 34   Long Answer questions

Maharashtra State Board of Secondary and Higher Secondary Education, Pune

Subject : Mathematics & Statistics (40)
Std. XII (Arts and Science)

Question Paper Format For Unit Test

Time : 1½ Hours   **Total Marks - 25**

Section A

Q.No.1   Select and write the most appropriate answer from the given alternatives
          for each sub-question: (2 marks each) [04]
          (i) to (ii)   MCQ

Q.No.2   Answer the following questions :   (1 mark each) [03]
          (i) to (iii)   VSA

Section B

Attempt any FOUR of the following questions: (2 marks each) [08]
          Q.No.3 to Q.No. 8   SA - I

Section C

Attempt any TWO of the following questions: (3 marks each) [6]
          Q.No.9 to Q.No. 11   SA - II

Section D

Attempt any ONE of the following questions: (4 marks each) [04]
          Q.No.12 to Q.No.13   LA

Question Paper Format For Terminal Examination

Time : 2½ Hours   **Total Marks - 50**

Section A

Q.No.1   Select and write the most appropriate answer from the given alternatives
            for each sub-question: (2 marks each) [10]
            (i) to (v)   MCQ

Q.No.2   Answer the following questions :   (1 mark each) [04]
            (i) to (iv)   VSA

Section B

Attempt any EIGHT of the following questions: (2 marks each) [16]
            Q.No.3 to Q.No. 13   SA - I

Section C

Attempt any FOUR of the following questions: (3 marks each) [12]
            Q.No. 14 to Q.No. 19   SA-II

Section D

Attempt any TWO of the following questions: (4 marks each) [08]
            Q.No.20 to Q.No.23   LA