

HIGHER SECONDARY SECOND YEAR

MATHEMATICS

MINIMUM LEARNING MATERIAL

BASED ON NEW SYLLABUS

Contains

- ❖ **Classification of Questions**
- ❖ **Question and Answers**

(Selected Chapters)

Prepared Under the Guidance of

Mr. S. Mars

CHIEF EDUCATIONAL OFFICER, CHENNAI DISTRICT

Preface

We convey our sincere gratitude to our respected Chief Educational Officer, who has given this opportunity to bring out a unique material for the students (XII standard Maths) in the name of Minimum Learning Material.

The minimum learning material is prepared based on the selected chapters. This includes classification for selected chapters, solved textbook exercise problems (2 marks, 3 marks and 5 marks).

Students can prepare the example problems based on the classification. All the textbook MCQ problems have to be practiced regularly. Students must practice all the problems in the classification. This material mainly focuses on the slow learners to achieve their goals.

Good effort always leads to success

All the best!!!

Prepared by:

Thiru. S. Anantha Krishnan,
Headmaster,
M.F.S.D. Hr. Sec. School,
Sowcarpet, Chennai – 79.

Thiru. M.D. Purushothaman,
P.G.Asst.,(Maths),
D.R.B.C.C.C. Hr. Sec. School,
Perambur, Chennai – 11.

Thiru. G. Kiran Kumar Reddy,
P.G.Asst.,(Maths),
S.K.D.T. Hr. Sec. School,
Villivakkam, Chennai - 49

Thiru. S. SenthilVel,
P.G.Asst.,(Maths),
DR. GMTTV Hr. Sec. School,
Sowcarpet, Chennai - 79

Thiru. RajendraPratap Yadav,
P.G.Asst.,(Maths),
M.F.S.D. Hr. Sec. School
Sowcarpet, Chennai - 79

Thiru. D. Raman,
P.G.Asst.,(Maths),
Hindu Union Committee Hr. Sec. School,
Choolai, Chennai - 112

INDEX

SL. NO	CHAPTER NUMBER	CONTENT	PAGE NUMBER
1.	-	CLASSIFICATION OF QUESTIONS	i & ii
2.	1	MATRICES AND DETERMINANTS (2 MARKS, 3 MARKS)	1
3.	2.	COMPLEX NUMBERS (2 MARKS, 3 MARKS, 5 MARKS)	8
4	3.	THEORY OF EQUATIONS (2 MARKS, 3 MARKS)	19
5.	5	TWO DIMENSTIONAL ANALYTICAS GEOMETRY (5 MARKS ONLY)	23
6.	6.	VECTOR ALGEBRA (5 MARKS ONLY)	29
7	11.	PROBABILITY DISTRIBUTION ((2 MARKS, 3 MARKS)	36
8.	12	DISCRETE MATHEMATICS (2 MARKS, 3 MARKS, 5 MARKS)	40
9.	13	5 MARK QUESTIONS ONLY (CHAPTER 1, CHAPTER 4, CHAPTER 10 APPLICATION PROBLEMS	46

EXERCISE	2 - MARKS	3 - MARKS	5- MARKS
1.1	EG: 1.2, 1.4, 1.7, 1.8, 1.11 EX: 1 (1)to(4)	EG: 1.3,1.5,1.6,1.9 EX : 2,5,6,7,8,9,10,11,12,13,14,15	EG:1.1,1.10,1.12 EX :3,4
1.2	EG:1.13,1.15(1) EX: 1.16,1.17	EG :1.14,1.15(1),1.18,1.20 EX: 3(1)	EG :1.19,1.21 EX : 3(2) 3(3)
1.3		EG : 1.22 EX: 1(2)(1),3,4	EG : 1.23,1.24 EX : 2,5,1(3)(4)
1.4		EX : 1(I), 1(II), 2,3,4	EG : 1.25,1.26 EX : 5
1.5			EG: 1.27,1.28 EX :1(1)(2),2, 3, 4
1.6		EG: 1.33 EX: 1.6(1)(3)	EG: 1.29,1.30,1.31,1.32,,1.34 EX: 1.6 1(1), 1(2), 1(4),2,3
1.7		EG: 1.35 EX: 1(2)	EG: 1.36,1.37,1.38,1.39,1.40
2.1	EG:2.1 Ex 2.1 1-6		
2.2	EX : 2.2 1 (all subs. EACH)	Eg 2.2 Ex 2.2(all subs.),3	
2.3	EX: 1(1), 1(2)	EX: 2(1), 2(2),3	
2.4	EX : 1(1)-(3),2(1)-(3),3	EG: 2.3,2.4,2.5,2.6,2.7,2.8(1) EX : 4,5,6,7(1)	EG: 2.8(2) EX: 7(2)
2.5	EX: 1 (all subdivisions)	EG: 2.9,2.10(all sub division), 2.11, 2.12, 2.13, 2.16, 2.17 EX: 2,3,4,5,6,8,10	EG:2.14,2.15 EX:7,9
2.6	EG: 2.19,2.20	EG: 2.18,2.21 EX: 1,3,4,5(all subs)	EX: 2
2.7	EX: 1(1)(2)(3)	EG:2.22,2.23,2.24,2.25,2.26 EX: 1(4) 2 (1)(2)	EG:2.27 EX: 3,4,5,6
2.8	EG: 2.28,2.29 EX: 1,7	EG: 2.30,2.31(all) 2.32,2.33 EX: 1,2,3,5,7,8,9	EG: 2.34,2.35,2.36 EX: 4(1)(2)(3)(4)
3.1	EG: 3.3 E: 2,8,11,12	EG: 3.1,3.2,3.4,3.5,3.7 EX: 1,3,4,5,7,8,9,10	EG: 3.6 EX: 6
3.2	EG: 3.9,3.8,3.11,3.12,3.13	EG: 3.10,3.14 EX: 1,2,3,4,5	
3.3	EX: 7	EX: 1,2,3,4,6,7 EG: 3.16,3.17,3.18,3.19,3.20,3.21,3.22	EG: 3.15 EX: 5
3.4			EG: 3.23,3.24 EX: 1,2
3.5		EG: 3.25,3.26,3.27,3.29 EX: 1(1)(2) 2(1)(2),3,4,5(2)	EG: 3.28 EX: 5(1),7
3.6	EG; 3.30,3.31(1)(2) EX: 1,3,4,5	EX: 2	
11.1	EG: 11.1 (1) 11.3,11.4	EG: 11.1,11.2,11.5 EX: 2	EG: 11.3 EX: 4,5
11.2	EX: 1	EG: 11.6,11.7,11.8,11.9,11.10 EX: 2	EX: 3,4,5,6,7
11.3	EX: 1	EG: 11.13	EG: 11.11,11.12,11.14,11.15 EX: 2,3,4,5,6
11.4	EX: 5,6	EX: 1,2,3,4,7,8	EG: 11.16,11.17,11.18
11.5	EX: 1,3,4	EX: 2,5,8,9	EG: 11.19,11.20,11.21,11.22 EX: 6, 7
12.1	EG: 12.1 1(I)(ii)(iii)	EG: 12.5, 12.6, 12.8 EX: 2, 3, 4, 6, 7,8	EG: 12.2, 12.3, 12.4, 12.7, 12.9, 12.10 EX: 1, 5, 9, 10
12.2	EG: 12.12 EX: 1, 2, 3, 4	EG: 12.13, 12.14, 12.15, 12.16, 12.17, 12.18 EX: 6(iii)(iv), 7(I)(ii)(iii), 8(I)(ii), 9, 10, 11, 12	EG: 12.19

IMPORTANT 5 MARKS

CHAPTER 4- INVERSE TRIGNOMETRIC EQUATION

EXAMPLES: 4.4, 4.7, 4.20, 4.22, 4.23, 4.27, 4.28, 4.29

EXERCISE : 4.1 - 6(I), 7, 8-(II)

EXERCISE : 4.2 - 5 (III), 6(I)

CHAPTER 5 - TWO DIMENSIONAL COORDINATE GEOMETRY

EXAMPLES : 5.10, 5.39, 5.40

EXERCISE : 5.1 - 6

EXERCISE : 5.2 - 4 (IV), 4(V), 8(V), 8(VI)

EXERCISE : 5.4 - 3

EXERCISE : 5.5 - 1,2,3,4,5,6,7,8,9,10

CHAPTER 6 : VECTOR ALGEBRA

EXAMPLES : 6.3, 6.5,6.6,6.7,6.23(1)(II), 6.27, 6.33, 6.34, 6.35, 6.44, 6.46

EXERCISE : 6.1- 7, 8, 9, 10

EXERCISE : 6.3 = 4(I)(II)

EXERCISE : 6.4 - 3

EXERCISE : 6.5- 4, 5, 6

EXERCISE: 6.7 - 1, 2, 3, 4, 5, 6,7

EXERCISE : 6.8 - 1, 2, 4

EXERCISE : 6.9 - 8

CHAPTER 10: DIFFERENTIAL EQUATION (APPLICATION PROBLEMA)

EXAMPLES: 10.27, 10.28, 10.29, 10.30

EXERCISE : 1, 2, 3, 4, 5, 6, 7, 8, 9, 10