

9th CLASS (SLOs) STUDENTS LEARNING OUTCOMES EXAMINATION.
FEDERAL BOARD SSC-I-EXAMINATION.-2023

MATHEMATICS

UNIT NO. 1

MATRICES AND DETERMINANTS.

EXERCISE NO.

QUESTIONS.

Exercise No.1.1	Q.1,Q.2, Q.3
Exercise No.1.2	Q.1,Q.2, Q.3, Q.5, Q.6, Q.7, Q.8, Q.9
Exercise No.1.3	Q.1,Q.2,Q.5 (i,v, vi, ix, x) Q.6, Q.7, Q.8 (i, ii, iii, iv, vi)
Exercise No.1.4	Q.1, Q.2, Q.3, Q.5, Q.8 (iii, iv), Q.6
Exercise No.1.5	Q.1 (i, ii,iii) Q.2 (i,ii), Q.3 (iii,iv). Q.4
Exercise No.1.6	Q.1 (i, ii,iv, v, vii) Q.2,Q.3, Q.4,Q.5,Q.6

UNIT NO. 2

REAL AND COMPLEX NUMBER

EXERCISE NO.

QUESTIONS.

Exercise No. 2.1	Q.3,Q.4 (i,ii,iii), Q.6 (i,ii)
Exercise No. 2.2	Q.1, Q.3
Exercise No. 2.3	Q.1 (i,ii), Q.3 (i,ii)
Exercise No. 2.4	Q.1 (i,iv) . Q.2, Q.3 (i,ii)
Exercise No. 2.5	Q.1 (i, ii,iv). Q.2 (i,ii,iii) , Q.3 (iv,v) Q.4
Exercise No. 2.6	Q.1 (iv), Q.2 (ii,iv) , Q.3 (i,ii,iv), Q.4 (i,iv,vi, v, vi) Q.5 (ii,iii,iv) Q.6 (i,iii, iv, v,vi) Q.7 (i,ii,iii,v,vi)

UNIT NO. 3

LOGARITHMS

EXERCISE NO.

QUESTIONS.

Exercise No.3.1	Q.1 (i,ii,iv,vi), Q.2 (iii,iv)
Exercise No.3.2	Q.1 (i,ii,iii). Q.3, Q.4 (ii,iii,iv), Q.5, Q.6
Exercise No.3.3	Q.1 (iv,v,vi). Q.2, Q.3 (iii,iv), Q.4, Q.5 (iii,iv,v)
Exercise No.3.4	Q.1 (i,iii,iv,vi,vii,viii), Q.2, Q.5

UNIT NO. 4

ALGEBRAIC EXPRESSION AND ALGEBRAIC FORMULAS.

EXERCISE NO.

QUESTIONS.

Exercise No.4.1	Q.1, Q.2, Q.3 (ii,iii,iv, vii,viii). Q.5 (ii,iii,iv,v,vi). Q.6 (ii,iii,iv,v)
Exercise No.4.2	Q.1, Q.2, Q.4, Q.6, Q.8, Q.10, Q.13, Q.15 (i,ii,iii)
Exercise No.4.3	Q.1 (iii,iv), Q.2 (ii,iii,iv), Q.3 (i,ii), Q.4 (iii,iv,v)
Exercise No.4.4	Q.1 (iii,iv,v,ii). Q.2 (i,ii) Q.3 (i). Q.4 (i,ii), Q.5 (ii) Q.6

UNIT NO. 5

FACTORIZATION.

EXERCISE NO.

QUESTIONS.

Exercise No.5.1	Q.1 (i,v,vi). Q.2 (iii,iv), Q.3 (i,iii). Q.4 (i,iv) . Q.5 (i,ii), Q.6 (i,ii)
Exercise No.5.2	Q.1(i,iv,v). Q.2 (i,ii,iii). Q.3 (ii,iii,iv,v, viii). Q.4 (i,iii,iv,v). Q.5 (i,ii,iii,iv) Q.6 (i,ii)
Exercise No.5.3	Q.1 (i,iii,iv). Q.2 (i,ii), Q.3 (i,ii), Q.5, Q.7, Q.9
Exercise No.5.4	Q.2, Q.4, Q.6, Q.7, Q.8, Q.9

UNIT NO. 6

ALGEBRAIC MANIPULATION.

EXERCISE NO.

QUESTIONS.

Exercise No.6.1	Q.1, Q.2 (i,ii,iii), Q.3 (i,iii). Q.4, Q.5 (ii,iii), Q.6, Q.7, Q.8, Q.9, Q.10
Exercise No.6.2	Q.1, Q.2, Q.4, Q.6, Q.7, Q.9, Q.10, Q.11, Q.13
Exercise No.6.3	Q.1 (i,iv,v,vi,vii), Q.2 (i,ii,iv,v), Q.3 (i), Q.4 (i,ii)

UNIT NO. 7 **LINEAR EQUATIONS AND INEQUALITIES.**

EXERCISE NO. **QUESTIONS.**

Exercise No. 7.1 Q.1 (i,ii,iii,v,vi,vii,viii,ix,x), Q.2 (i,ii,iii,v,viii)

Exercise No. 7.2 Q.1, Q.2, (i,ii,iv,v,vii,viii)

Exercise No. 7.3 Q.1 (i,ii,iv,v,vii,viii), Q.2 (i,ii,iii,iv,v,vi,vii,viii)

UNIT NO. 8 **LINEAR GRAPHS AND THEIR APPLICATIONS.**

EXERCISE NO. **QUESTIONS.**

Exercise No. 8.1 Q.1,Q.2(i,ii,iii,iv,v,vi,vii,viii,xiii,xiv) .Q.5

Exercise No. 8.2 Q.3 (a, b, c), Q. 4

Exercise No. 8.3 Q.1, Q.2, Q.3

UNIT NO. 9 **INTRODUCTION TO COORDINATE GEOMETRY**

DESCRIPTIVE GEOMETRY

EXERCISE NO. **QUESTIONS.**

Exercise No. 9.1 Q.1 (a, d, e), Q.2 (I,iii) Review – 9(Q.2)

Exercise No. 9.3 Q.1 (a, c, f)

UNIT NO. 10 **CONGRUENT TRIANGLES**

EXERCISE NO. **QUESTIONS.**

Exercise No. 10.1 Q.1

Exercise No. 10.3 Q.1

Exercise No. 10.4 Q. 1, Q.2

REVIEW. 10 Q.3.,Q.4,Q.5

UNIT NO. 11 **PARALLELOGRAMS AND TRIANGLES**

EXERCISE NO. **QUESTIONS.**

Exercise No.11 Q.1, Q.2, Q.3, Q.4, Q.5

UNIT NO. 12 **LINE BISECTORS AND ANGLE BISECTORS.**

EXERCISE NO. **QUESTIONS.**

Exercise No.12 Q.1, Q.2, Q.4, Q.5., Q.6

UNIT NO. 13 **SIDES AND ANGLES OF A TRIANGLE.**

EXERCISE NO. **QUESTIONS.**

Exercise No. 13.2 Q.1, Q.2, Q.3

UNIT NO. 14 **RATIO AND PROPORTION.**

EXERCISE NO. **QUESTIONS.**

Exercise No. 14.1 Q.1

Exercise No. 14.2 Q.1, Q.2, Q.4 Review: Q.5, Q. 6

UNIT NO. 15 **PYTHAGORAS THEOREM**

EXERCISE NO. **QUESTIONS**

Exercise No. 15 Q.6. Review: Q.1, Q.2

UNIT NO. 16 **THEOREMS RELATED WITH AREA**

EXERCISE NO. **QUESTIONS**

Exercise No. 16 Q.1, Q.2, Q.3, Q.4

UNIT NO. 17

PRACTIAL GEOMETRY- TRIANGLES.

EXERCISE NO.

QUESTIONS.

Exercise No. 17.1

Q.1 (i,iii, iv,v,vii) , Q. 2 (i,ii,iii) ,Q. 3, Q.4 (ii). Q.5 (i,iii)

Exercise No. 17.2

Q.1 (ii,iii) .Q.2 (I, ii, iii), Q.3 ii, (iii).Q.4 (ii,iii)