Punjab Education, Curriculum, Training and Assessment Authority

SMART SYLLABUS / ACCELERATED LEARNING PROGRAMME (ALP)- DELETED TOPICS AND EXERCISE QUESTIONS OF MATHEMATICS-11

To facilitate students, the content of Mathematics-11 has been rationalized and reduced from the compulsory textbook. This rationalization aims to help students focus on the key Student Learning Outcomes (SLOs) that are essential for conceptual understanding and examination preparation, rather than covering the entire textbook. The unit-wise Smart Syllabus (ALP) is provided below. It clearly specifies the exercises, examples, and questions excluded from Mathematics-11 for the BISE Annual Examination- 2027. Teachers and students are advised to follow this Smart Syllabus (ALP) for effective teaching, learning, and exam preparation.

Name of the Unit	Excluded Content & Questions of Mathematics-11
1 **Complex Numbers**	• 1.4.1 The Polar Form of a Complex Number, Operations on Complex Numbers in Polar Form, Examples 12 to 16; Pages # 15 to 18. • 1.5 Complex Numbers in the Real World, Examples 17 & 18; Pages # 19 to 20. • Exercise # 1.5: Q # 2 to Q # 22; Pages # 20 to 21.
2 **Functions and Graphs**	• 2.5 Real Life Applications, Examples 12 & 13; Pages # 31 to 32. • Exercise # 2.2: Q # 4 & Q # 5; Page # 33.
3 **Theory of Quadratic Functions**	• 3.5 Real World Problems of Quadratic Equations and Inequalities, Examples 9 & 10; Pages # 41 to 42. • Exercise # 3.2, Q # 2 to Q # 7; Page # 43.
4 **Matrices and Determinants**	• 4.6 Elementary Row Operation on a Matrix; Page # 61 • 4.7 Echelon and Reduced Echelon Form of Matrices, Examples 8 to 10; Pages # 62 to 64. • 4.8 System of Non-Homogeneous Linear Equations, Example # 11; Pages # 64 to 67. • 4.9 System of Homogeneous Linear Equations, Examples 14 & 15; Pages # 71 to 74. • 4.10 Applications of Matrices in Real World, Examples 16 & 17; Pages # 74 to 76. • Exercise # 4.3: Q # 1, 2, 5, 6, 7, 8, 9, 10 & 11; Pages # 76 to 77.

5 **Partial Fractions**	• **Complete unit is retained. No content and questions are deleted / excluded.**
6 **Sequences and Series**	• Exercise # 6.2: Q # 20, 21, 22 & 23; Page # 94. • Exercise # 6.3: Q # 6; Page # 95. • Exercise # 6.4: Q # 17, 18 & 19; Page # 99. • Exercise # 6.5: Q # 7, 8, 9, 10 & 14; Page # 102. • Exercise # 6.6: Q # 7 & 8; Page # 104. • Exercise # 6.7: Q # 6; Page # 105. • 6.8 Arithmetico-Geometric Progression, Example 19, Examples 20 & 21; Pages # 106 to 109. • Exercise # 6.8 (Complete); Pages # 109 to 110. • Exercise # 6.9: Q # 13, 14, 15, 16, 17 & 18; Page # 114. • 6.11 Real Life Problems involving Sequences and Series, Examples 27 to 31; Pages # 117 to 120. • Exercise # 6.11 (Complete); Pages # 121 to 122.
7 **Permutations and Combinations**	• Exercise # 7.2: Q # 6, 9 & 11; Page # 129. • Exercise # 7.3: Q # 9, 10 & 11; Page # 132. • Exercise # 7.4: Q # 4, 5, 6, 17 & 18; Pages # 138 to 139.
8 **Mathematical Induction and Binomial Theorem**	**Complete unit is deleted / excluded.**
9 **Division of Polynomials**	• **Complete unit is retained. No content and questions are deleted / excluded.**
10 **Trigonometric Identities**	• 10.6 Triple Angle Identities, Pages # 192 to 193. • Exercise # 10.3, Q # 2 (viii, ix, x & xii), Q # 5; Pages # 194 to 195. • Exercise # 10.4, Q # 6, 7, 8, 9 &10; Page # 199.
11 **Trigonometric Functions and their Graphs**	• 11.4.1 Graph of Trigonometric Functions; Pages # 205 to 206. • 11.4.2 Graph of y = sin x; Pages # 206 to 207. • 11.4.3 Graph of y = cos x; Pages # 207 to 209. • 11.4.4 Graph of y = tan x; Pages # 209 to 210. • Exercise # 11.2 (Complete); Page # 211.

12 **Limit and Continuity**	• 12.4 Application of Transcendental Functions to Limits and Continuity on Real World Problems, Examples 14 to 17; Pages # 234 to 235. • Exercise # 12.3 (Complete); Pages # 235 to 236.
13 **Differentiations**	• 13.7 Applications of Differentiation, Examples 12 to 15; Pages # 255 to 256. • Exercise # 13.3 (Complete); Pages # 256 to 257.
14 **Vectors in Space**	• Exercise # 14.1: Q # 9 & 10; Page # 266. • Exercise # 14.2: Q # 7, 8 & 12; Page # 274. • 14.4 Scalar Triple Product, Examples 23 to 31; Pages # 283 to 288. • Exercise # 14.4 (Complete); Pages # 289 to 290.