# Boards of Technical Education Pakistan
# Business Mathematics
# (Approved Syllabus for ACCA students)

**Total Contact/ Teaching Hours - 120**
**Total Marks – 100**

| S. No | Topics | Detail | Contact Hours | Marks |
|---|---|---|---|---|
| 1 | Number System | 1.1) Introduction to number system<br>1.2) Kind of number system<br>1.3) Conversion of number system with each other | 10 | 5 |
| 2 | Estimation | **Rounding Numbers:**<br>2.1) Rounding to the Nearest Ten,<br>2.2) Rounding to the Nearest Hundred<br>2.3) Rounding to the Nearest Thousand<br>2.4) Rounding to the Nearest Hundred Thousand<br>**Rounding Decimals:**<br>2.5) Rounding to the Nearest Tenth<br>2.6) Rounding to the Nearest Hundredth | 2 | 5 |
| 3 | Percentage | 3.1) Percent of a Number<br>3.2) Finding Percentage<br>3.3) Fractions and percent<br>3.4) Percents and Fraction<br>3.5) Decimals and percents<br>3.6) Percents and Decimals | 3 | 5 |
| 4 | Application of Percentage | 4.1) Definition of Commission<br>4.2) Discount Markup<br>4.3) Simple Interest | 5 | 5 |

| 5 | Ratio & Proportion | 5.1) Ratio<br>5.2) Equal ratio<br>5.3) Continued Ratio<br>5.4) Dividing in a given ratio<br>5.5) Combining ration<br>5.6) Ratio of variables using coefficients<br>5.7) Proportion<br>a) Direct proportion<br>b) Indirect proportion<br>5.8) Compound proportion<br>5.9) Percentage<br>5.10) Profit and loss | 20 | 15 |
|---|---|---|---|---|
| 6 | Straight Line | 6.1) Distance between two points<br>6.2) Mid-point formula<br>6.3) Slope between two points<br>6.4) Form of equations<br>a) two points form<br>b) slope point form<br>c) Slope intercept form<br>d) Two intercepts form<br>6.5) Intercepts<br>6.6) Sketching | 20 | 15 |
| 7 | Parabolic Curve | 7.1) Coordinates of vertex<br>6.2) Roots of the function<br>6.3) Sketching | 10 | 10 |
| 8 | Linear Equation & Quadratic Equation | 8.1) Linear Equation Involving one variable<br>8.2) Linear Involving two variables<br>8.3) Quadratic equation involving one variable only | 10 | 10 |
| 9 | Matrices & Determinants | 9.1) Definition<br>9.2) Types of Matrices<br>9.3) Order of Matrices<br>9.4) Transpose of a Matrix<br>9.4) Addition and Subtraction of Matrices<br>9.5) Multiplication of Matrices<br>9.6) Multiplicative inverse of a matrix<br>9.7) Solution of equation by Cramer's rule and matrices Method | 20 | 15 |

| 10 | Finance | 10.1) Simple Interest<br>10.2) Compound Interest:<br>    annual compounding and<br>    multiple compounding<br>10.3) Annuities | 20 | 15 |
| **Total** | | | **120** | **100** |

**Reference Books** - Following authors' books have been recommended to study and prepare for Business Mathematics: Tutors/ students can also use the reference books besides below mentioned books as per the availability in their region.

    a) Khursheed Alam
    b) Shahid Jamal
    c) Hamid Abdul Hakim