

## SYLLABUS — For MCA

The PGCET-2018 will be held in one session separately for MCA courses conducted for **100 marks** with **150 minutes** duration. Each question paper will be of (Objective) Multiple Choice type. The question paper will be in four different versions. Each question will have four different options. **60** questions in **Part - A** carry **one mark** each and **20** questions in **Part -B** carry **two marks** each. Thus there will be **80** questions and the total mark is **100**. The questions distribution will be based on the following pattern with a variation of **5 to 10%**.

### Question paper pattern:

Divisions	Units	No. of Questions (Approximately)	Marks
Part- A (1 Mark each)	Unit-1	20	20
	Unit-2	15	15
	Unit-3	10	10
	Unit-4	10	10
	Unit-5	5	5
Part- B (2 Mark each)	Unit-1	7	14
	Unit-2	5	10
	Unit-3	5	10
	Unit-4 & Unit -5	3	6
<b>Total</b>		<b>80</b>	<b>100</b>

**MCA:** The syllabus for the Post Graduate Common Entrance Test for MCA PG Courses are detailed below:

The syllabus shall comprise of the following broad areas.

#### Unit-1: Mathematics.

**Algebra :** Fundamental operations in Algebra, Expansion, Factorization, Simultaneous Linear / Quadratic equations, Indices, Logarithms, Arithmetic, Geometric and Harmonic progressions, Binomial Theorem, Permutations and Combinations, Determinants, Matrices, Sets and application to solution of simultaneous linear equations.

**Co-Ordinate Geometry:** Rectangular Cartesian co-ordinates, Equations of Line, Mid-point, Intersections etc, Equations of a Circle, Distance formulae, Pair of straight lines, Parabola, Ellipse and Hyperbola, Simple Geometric transformations such as Translation, Rotation, Scaling.

**Boolean algebra:** Basic operations, Evaluation of Boolean expressions, Basic postulates of Boolean Algebra.

**Trigonometry:** Simple identities, Trigonometric equations, Properties of Triangles, Inverse function.

**Probability and Statistics:** Basic concept of Probability theory, Averages, Dependent and Independent events, Frequency distributions and measures of dispersions, Skewness and Kurtosis, Correlation and Regression, Random variables.

#### **Unit-2: Computer Awareness**

**Computer Basics:** Organization of a computer, Central Processing Unit (CPU), Input /Output devices, Computer Memory, Programming Languages, Types of Software's, General awareness about Internet, Web Applications, Database Applications and Information Systems.

**Data Representation:** Representation of Characters, Integers and Fractions, Binary, ASCII and Hexadecimal representations.

**Binary Arithmetic:** Addition, Subtraction, Multiplication, Division, Two's complement arithmetic, Floating-point representation of numbers, normalized Floating-point representation.

**Operating Systems:** Evolution of operating systems, types of operating systems, functions of an operating system, modern operating systems.

#### **Unit-3: Analytical Ability and Logical Reasoning**

The questions in this unit will cover Logical Reasoning, Quantitative reasoning and Visuo-spatial reasoning.

#### **Unit-4: General Awareness**

This unit shall carry questions to test the general awareness about Business, Finance, Industry, Transportation, Scientific inventions, Governance, Healthcare and Cultural dimensions etc.

#### **Unit-5: General English**

The questions in this unit will cover basic English grammar, vocabulary, comprehension, synonyms, antonyms, sentence correction, word & phrases, jumbled paragraph.