

SUGGESTED LAYOUT OF GUIDELINES FOR CSB CANDIDATES

1. **Aim.** To test the level of knowledge of candidate and assess his/her suitability for employment as PGT/TGT in Mathematics in an English Medium Private System, following the CBSE syllabus.
2. **Knowledge Level.** The candidates should have min knowledge of Mathematics of PG Level for PGTs and of Graduation Level for TGTs with specific mastery and clarity of basic concepts of all topics upto +2 level on NCERT books/CBSE syllabus.
3. **Understanding.** Candidates should have good understanding of concepts of Mathematics from secondary level to PG/Graduate level. He/she should be able to analyse and comprehend a question posed and select the most relevant answer out of given options in limited time available.
4. **Awareness.** The candidate must be aware about the latest development in the relevant subject and teaching tool to make teaching and learning effective.

5. **Structure of the paper.** The structure of the paper is as under :-

(a)	Knowledge Base	-	25%
(b)	Understanding Based	-	20%
(c)	Application Based	-	30%
(d)	Skill Based	-	25%

6. **Detailed Syllabus.** A blue print having rough distribution of syllabus with weightage is as under

For PGT Maths.

<u>Ser No</u>	<u>Topic with Chapters</u>	<u>No of Question</u>	<u>Weightage</u>
(a)	<u>Relation & Functions</u> Relations, Functions Inverse Trigonometric Functions Sets, Trigonometric Functions Solution of Triangles	08	16
(b)	<u>Algebra</u> Matrices, Determinants Principle of Mathematical Induction Complex Numbers Linear Equations Permutation & Combination Binomial Theorem Sequences & Series	16	32

(c)	<u>Calculus</u>	14	28
	Limits & Derivatives Continuity & Differentiability Integrals, Differential Equations Applications of Integrals, LP		
(d)	<u>Vector, 2D & 3D Geometry</u>	12	24
	Vectors, Applications of Vectors Straight Lines, Circles, Conic Sections Plane, Sphere, Concepts of Co-ordinate Geometry.		
(e)	<u>Statistics & Probability</u>	05	10
(f)	<u>Miscellaneous</u>	05	10
	Mensuration, Linear Equations in two variables, Percentage, Profit & Loss, Decimal & Fractions, Simple Interest, Compound Interest.		

For TGT Maths

(a)	<u>Algebra & Mensuration</u>	17	34
	Equations with two variables Quadratic Equation AP, GP & HP Matrices & Determinants Permutation & Combination Binomial Theorem Mathematical Induction Polynomials, Surface Area & Volume of Solids Area & Perimeter of Plane Figures HCF & LCM, Surds & Indices		
(b)	<u>Function & Relation</u>	08	16
	Function & Relation, Mapping Inverse Trigonometric Functions Trigonometric Functions & Solution Properties & Solution of Triangles Height & Distance.		
(c)	<u>Calculus</u>	07	14
	Limit Continuity & Differentiability Differentiation, Integration Application of Derivatives.		

(d)	<u>Geometry & Vectors</u>	11	22
	Plane Geometry including concepts on 2D & 3D Conic Sections Vectors & its Application		
(e)	<u>Numbers</u>	03	06
	Real Number & its Concept Complex Numbers		
(f)	<u>Statistics & Probability</u>	04	08
(g)	<u>Miscellaneous</u>	10	20
	Concept of Percentage Ratio & Proportion, Time Speed & Work, Problem on Age, Simple & Compound Interest, Problem on Numbers, Pipe & Cisterns, Decimal & Fractions		

7. **Study/Reference Material.** Though the aspirants should have the knowledge of the subject of PG/Graduation level, however, must study in detail NCERT books of standard VI to XII. A few undermentioned support books may be considered for preparation :

- (a) RD Sharma for Class IX to XII.
- (b) Competitive books/support books of various Publication houses such as Comprehensive, Arihant, Face to Face, Pearson, S Chand, Tata Macgraw Hill, Ratna Sagar & RS Agarwal.
- (c) Differential calculus by Shanti Narayan (S Chand & Co), Vector calculus by GN Kapoor & Shanti Narayan (S Chand & Co), 3D by SL Loney (S Chand & Co), Integral calculus by Shanti Narayan (S Chand & Co) & Differential equation by MD Rai Singhaniya (S Chand & Co).