

JMMC SRINIVAS RAMANUJAN MEMORIAL
13TH MATH TALENT SEARCH EXAM
2020-2021 (ALL INDIA)

For Class – (I - XII) + CLASS - XIII (THE CATEGORY OPEN TO ALL)

Rules & Regulations:

LAST DATE of FORM SUBMISSION (LEVEL - 1) 20th December ,2020

LEVEL 1

Exam Date : 27th December, 2020. (SUNDAY)

Time :

CLASS 13 – 6:00 A.M to 7:00 A.M

CLASS 12 – 7:15 A.M to 8:15 A.M

CLASS 11 – 8:30 A.M to 9:30 A.M

CLASS 1 – 9:45 A.M to 10:45 A.M

CLASS 2 – 11:00 A.M to 12:00 NOON

CLASS 3 – 12:15 P.M to 1:15 P.M

CLASS 4 – 1:30 P.M to 2:30 P.M

CLASS 5 – 2:45 P.M to 3:45 P.M

CLASS 6 – 4:00 P.M to 5:00 P.M

CLASS 7 – 5:15 P.M to 6:15 P.M

CLASS 8 – 6:30 P.M to 7:30 P.M

CLASS 9 – 7:45 P.M to 8:45 P.M

CLASS 10 – 9:00 P.M to 10:00 P.M

Login ID & password of student account will be sent to their registered email within 25th December, 2020.

LEVEL 2

Exam Date : 7th February, 2021. (SUNDAY)

Time :

CLASS 13 – 6:00 A.M to 7:00 A.M

CLASS 12 – 7:15 A.M to 8:15 A.M

CLASS 11 – 8:30 A.M to 9:30 A.M

CLASS 1 – 9:45 A.M to 10:45 A.M

CLASS 2 – 11:00 A.M to 12:00 NOON

CLASS 3 – 12:15 P.M to 1:15 P.M

CLASS 4 – 1:30 P.M to 2:30 P.M

CLASS 5 – 2:45 P.M to 3:45 P.M

CLASS 6 – 4:00 P.M to 5:00 P.M

CLASS 7 – 5:15 P.M to 6:15 P.M

CLASS 8 – 6:30 P.M to 7:30 P.M

CLASS 9 – 7:45 P.M to 8:45 P.M

CLASS 10 – 9:00 P.M to 10:00 P.M

Students can participate to LEVEL -2 EXAM from their account on 7th February 2021 on scheduled time (Before 15th January 2021 registration fees for level 2 exam must be deposited to avoid cancelation of candidature) .

A student must score 35% or more in LEVEL- 1 EXAM to get chance to participate in LEVEL- 2 EXAM.

Question Pattern: For BOTH EXAMS (LEVEL 1 & LEVEL 2): M.C.Q containing 60 questions (ONLINE MODE).

Marking Procedure : 5 Marks will be awarded for each correct answer and there is no negative marking for wrong answer in Level - 1 Exam. But only **in Level - 2 Exam, 2 marks will be deducted for every wrong answer.**

Answering Process : ONLINE MODE with computer or smart phone from student's place.

Version of Question : ENGLISH

Date of Announcement of Result of Level -1 Exam : 31st December, 2020 at 11 P.M at www.mathjmmc.in.

Date of Announcement of Result of Level -2 Exam : 1st March, 2021 at 11 P.M at www.mathjmmc.in.

Prizes will be sent to the eligible student's place within One Month of declaration of the LEVEL 2 result.

Prizes : (For LEVEL- 2 Exam) :

First **15 RANKERS** of each Class throughout India will be awarded **Books, Medals and Mementoes (For 1st Rankers).**

ALL THE PARTICIPANTS will be given online - certificates mentioning marks, ranks (for 1st 15 Rankers of each Class) and grades from JMMC and many other Prizes are also there.

NOTE : A student must score **60% or more in LEVEL-2 EXAM** to get their name enlisted in the merit list. Only the top 15 meritorious students from each class (at least 70% marks holders) from the merit list will be considered as rankers.

Each LEVEL -1 Exam Form Costs Rs.225/-

Each LEVEL- 2 Exam Form Costs Rs.360/-(For only those students who qualify the Level - 1 Exam)

An expression of our good will.....

Every student will feel happy and proud to know that a part of the proceeds from the sale of this form will go to help some of their poor and meritorious friends ---- A TOKEN OF OUR SINCERE DESIRE IN THE SERVICE OF THE NATION.

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**JMMC SRINIVAS RAMANUJAN MEMORIAL
13TH MATHEMATICS TALENT SEARCH EXAM
ALL INDIA –(2020-2021) (online)**

SYLLABUS

CLASS - I Number Sense, Computation Operations, Addition, Subtraction, Multiplication, division, Reasoning and Aptitude.

CLASS - II Formation of numbers and counting system, Multiplication and Division, Prime numbers, Divisibility, Fractions and Decimals, Measurements and Units, Measurement of time, Reasoning and Aptitude.

CLASS - III Number system, Additions, Subtraction, Multiplication, Division, Fractional Numbers, Money, Time measurement, Measurement (Length, Mass, Capacity), Calendar, Average, Reasoning and Aptitude.

CLASS - IV Number system, Additions, Subtraction, Multiplication, Division, Multiples & Factors, H.C. F, L.C.M, Fractional Numbers, Additions & Subtraction of Fractions, Multiplication & Division of Fractions, Decimal fraction, Unitary Method, Average, Measurement of time, Measurement & Metric System (Length, Mass, Capacity), Reasoning and Aptitude.

CLASS - V Number system, Addition, Subtraction, Multiplication, Division, Factors and Multiples, Fractions and Decimal fraction, Metric system, Area of a rectangle & Square, Volume of Rectangular Paralleopiped, Unitary System, Simplification, Clock, Reasoning and Aptitude.

CLASS - VI Number system, H.C.F and L.C.M, Fractions, Decimal fraction and recurring decimals, Simplification, square root, percentage, Average, Measurement and Metric system, Unitary method, Ratio and proportion, Area and Perimeter, Algebra-Idea of variables, Geometry-point, Line, Line Segment, Ray, Angles, Circle, Different Geometrical shapes, Geometry of solids, Symmetry, Reasoning and Aptitude.

CLASS - VII Number System, Fractions, Decimal Fraction, Square root of fractions, Simplification, Unitary method, Ratio and proportion, Time and Distance, Laws of Indices, Graph, Algebra-Application of formulae, Factorization, Parallel and transverse lines, Properties of Triangles, Congruency, Area and Perimeter of quadrilaterals, Symmetry, Reasoning and Aptitude.

CLASS - VIII Number System, Simplification, Cube root, Rule of three, Percentage, Mixture, Time and Distance, Time and Works, Graph, Pie chart, Algebra-Factorization, H.C.F, L.C.M, Equation framing and solution, Triangles, Geometrical Proof, Reasoning and Aptitude.

CLASS - IX Real Numbers, Laws of Indices, Graph, Co-ordinate Geometry: Distance Formula, Linear Simultaneous Equations, Properties of Parallelogram, Polynomial, Factorisation, Transversal & Mid-point Theorem, Profit and Loss, Statistics, Theorems on Area, Construction, Area & Perimeter of Triangle & Quadrilateral, Circumference of Circle, Area of Circle, Co-ordinate Geometry Internal and External Division of Straight Line Segment, Co-ordinate Geometry : Area of Triangular Region, Set Theory, Probability Theory, Reasoning and Aptitude.

CLASS - X Set theory, A. P & G. P, Quadratic Equations with one variable, Simple Interest, Theorems related to circle, Rectangular parallelopiped or Cuboid, Ratio and Proportion, Compound Interest and Uniform Rate of Increase or Decrease, Theorems related to Angles in a Circle, Right Circular Cylinder, Quadratic Surd, Theorems related to Cyclic Quadrilateral, Construction : Construction of Circumcircle and Incircle of a Triangle, Sphere, Variation, Partnership Business, Theorems related to Tangent to a Circle, Right Circular Cone, Construction : construction of Tangent to a Circle, Similarity, Real life problems related to different Solid Objects, Trigonometry : Concept of Measurement of Angle, Construction : Determination of Mean Proportional, Pythagoras Theorem, Trigonometric Ratios and Trigonometric Identities, Trigonometric Ratios of Complementary Angle, Application of Trigonometric Ratios : Heights & Distances, Statistics : Mean, Median, Ogive, Mode, Reasoning and Aptitude.

CLASS - XI Basic Trigonometry, Height & Distance, Associated angle, Compound angle, Transformation of sums & products, Multiple & submultiple angle, Variation, Progressions, Logarithm, Complex Numbers, Surds, Indices, Quadratic equation & expression, Co-ordinates-Locus, Straight line, Functions & Limit, Set Theory, Number Theory, Reasoning and Aptitude.

CLASS - XII Trigonometric general equation, Inverse Trigonometric functions, Properties of triangles, Matrix, Determinants, Induction, Binomial theorem, Permutation & Combination, Probability, Number theory, Set Relation Mapping, Inequalities, Circle, Conics, Continuity, Differentiability, Differentiation, Integration, Differential equation, Tangent normal, Differential-rate measure-error-approximation, , Increasing & Decreasing Function, Maxima & Minima, Rolle's theorem & Lagrange's theorem, Area under curve, 3-D Co-ordinates-Basic concept, Application of calculus in Dynamics, Reasoning and Aptitude.

CLASS - XIII (THE CATEGORY OPEN TO ALL) Classical Algebra, Abstract Algebra, Linear Algebra, Boolean Algebra, Co-ordinate Geometry 2D & 3D, Plane Geometry, Transformation Geometry, Riemann Geometry, Real Analysis (Differential & Integral), Complex Analysis, Calculus in one Variable, Several variable Calculus, Laplace Transformation, Fourier series & Transformation, Differential equation (ODE, PDE, Non-linear), Topology, Hilbert Transform, Hankel Transformation, Graph Theory, Vector Algebra & Calculus, Tensor Analysis, Operation Research, Probability & Statistics, Dynamics (Particle & Rigid), Statics, Fluid Mechanics, Astronomy, Numerical Analysis, Number theory, Celestial Mechanics, Functional Analysis, Projective Geometry, Discrete

Mathematics, Z-Transformation, Variational Calculus, Automata Theory, Naive Set Theory, Chebyshev Polynomials, Fuzzy sets, Differential Geometry, Measure Theory, Reasoning and Aptitude.