## YOS Exam Syllabus 2023

In the exam, 80 questions will be asked: 40 Mathematics, 10 Geometry and 30 General Ability and Logic. The exam will be held in a single session and its total duration is 130 minutes.

| Mathematics |  |  |  |
| :--- | :--- | :---: | :---: |
| 1 | Basic Concepts |  |  |
| 2 | Division and divisibility |  |  |
| 3 | Numbers (integers, rational numbers, decimal numbers, exponential numbers, rooted <br> numbers) |  |  |
| 4 | Ratio- Proportion |  |  |
| 5 | Factorization |  |  |
| 6 | First-degree equations and systems of equations, second-degree equations |  |  |
| 7 | First order inequalities |  |  |
| 8 | Absolute value |  |  |
| 9 | Sets |  |  |
| 10 | Functions |  |  |
| 11 | Permutation |  |  |
| 12 | Combination |  |  |
| 13 | Binomial |  |  |
| 14 | Probability |  |  |
| 15 | Parabola |  |  |
| 16 | Polynomials |  |  |
| 17 | Complex numbers |  |  |
| 18 | Logarithm |  |  |
| 19 | Trigonometry |  |  |
| 20 | Derivatives (Only derivatives of polynomial functions, excluding higher order derivatives) |  |  |
| 21 | Limit (Only the indeterminate forms that can be removed by factoring the numerator and the <br> denominator) |  |  |
| 22 | Integration (Only integral of polynomial functions, excluding volume calculation) |  |  |
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| 1 | Angle in the plane |  |  |
| 2 | Circle (area, length and angle) |  |  |
| 3 | Triangle (length, area, angle, similarity, bisector, median) |  |  |
| 4 | Square (length, area, angle) |  |  |
| 5 | Rectangle (length, area, angle) |  |  |
| 6 | Parallelogram (length, area, angle) |  |  |
| 7 | Trapezoid (length, area, angle) |  |  |
| 8 | Regular polygon (length, area, angle) |  |  |
| 9 | Analytical Geometry |  |  |
|  |  |  |  |


| 1 | Shape Complement (According to the relevance given in the first line which shape <br> complements the second line, according to the relevance given in the first and second line <br> which shape complements the third line) |
| :--- | :--- |
| 2 | Finding the different shape |
| 3 | The relation of letters and numbers |
| 4 | The relation of numbers and shapes |
| 5 | Finding the requested in a letter chart |
| 6 | Shape additions |
| 7 | Which shape complements in series of shapes |
| 8 | Shape equations (scales), shape equations (charts) |
| 9 | Shape join |
| 10 | Finding the missing piece (which shape should be replaced by the question mark in the $3 \times 3$ <br> matrix) |
| 11 | Cube expansion |
| 12 | Complementing shapes |
| 13 | Finding the rule among numbers (generating numbers) |
| 14 | Number sequences, and number sequences pattern |
| 15 | Shape pattern |
| 16 | Equation systems with shapes |
| 17 | Rotating the shape |
| 18 | Finding the rule in numbers in a shape |
| 19 | Finding the rule related to numbers |

