

Syllabus - EAID CAA Placement Test

Mathematics – Set 1

Topics:

Module I: Sets & Functions

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| 1 | (a) Sets: Introduction to Set, Operations on sets (The difference between two sets). |
| | (b) Functions: Domain of polynomial and rational functions, the value of polynomial function (at specific point), and the composite function |
| | (c) Limits of rational function at Infinity |
| | (d) Derivative of Natural logarithm. |
| | (e) Determine an acceleration from the derivative for Polynomial function. |

Module II: Algebra

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| 2 | Convert a complex numbers to polar coordinates, Algebraic solutions of linear inequalities in one variable, solving the system of equations in two variables, Operation for matrices (2×2) (adding, subtracting, and multiplication), solution of linear equation in one variable, simplify and expand the equations, arithmetic sequence, Functions of General Angles. |
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Module III: Analytical Geometry

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| 3 | Circles (Center the origin and radius r), Parabolas ($y = x^2$) and $x = y^2$) determine the vertex and symmetric axis, the slope of a line, distance between two points. |
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Module IV: Calculus

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| 4 | Integration:
(a) Polynomial function. |
| | (b) Trigonometric functions (sin x and cos x). |

Module V: Probability and Statistics

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| 5 | Mean, and Range from ungrouped data, Introduction to Probability (a single throw with two uniform dice). |
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