

TOPICS TO BE COVERED FOR THE NUMERACY TEST (O-LEVEL STANDARD)
INSTITUT TEKNOLOGI BRUNEI
INTAKE 26 SESSION 2010/2011

HND PROGRAMMES	TOPICS
<ul style="list-style-type: none"> ▪ HND in Business (Accounting) ▪ HND in Business (Finance) ▪ HND in Business (Management) ▪ HND in Business (Marketing) 	<ul style="list-style-type: none"> ▪ Basic arithmetic operations by solving simple problems on fractions, mixed numbers, decimals, exponents, percentages, and sequences (Please note that some questions require the candidates to write the answers in specific number formats or decimal places. Marks are not given if candidates fail to do so). ▪ Basic algebra by solving problems on linear equations, simultaneous equations, and quadratic equations. ▪ Problems on ratios, proportions, and percentages which can be solved using simple algebraic expressions. ▪ Problems on ratios, proportions, and percentages which are based on business situations. ▪ Problems involving simple interest, compound interest, and foreign exchange computations.
<ul style="list-style-type: none"> ▪ HND in Computing ▪ HND in Information Systems ▪ HND in Internet and Multimedia Design 	<ul style="list-style-type: none"> ▪ Logic questions ▪ Patterns recognition ▪ Area and perimeter ▪ Simple Algebra ▪ Trigonometry ▪ Solving mathematical problems
<ul style="list-style-type: none"> ▪ HND in Civil Engineering ▪ HND in Construction Engineering & Management 	<ul style="list-style-type: none"> ▪ Algebra ▪ Bearings ▪ Solutions of equations ▪ Angles & Circle properties ▪ Trigonometry ▪ Graphs of functions & Graphical solutions ▪ Mensuration ▪ Statistics

TOPICS TO BE COVERED FOR THE NUMERACY TEST (O-LEVEL STANDARD)
INSTITUT TEKNOLOGI BRUNEI
INTAKE 26 SESSION 2010/2011

<ul style="list-style-type: none"> ▪ HND in Mechanical Engineering 	<ul style="list-style-type: none"> ▪ Arithmetic ▪ Mensuration ▪ Algebra and Graphs ▪ Geometry ▪ Trigonometry ▪ Vectors ▪ Matrices ▪ Differentiation and Integration
<ul style="list-style-type: none"> ▪ HND in Communication & Computer System Engineering ▪ HND in Electrical Power & Control Engineering ▪ HND in Network Engineering 	<ul style="list-style-type: none"> ▪ Calculate with decimals and percentages ▪ Simplify expressions involving fractions ▪ Use the rules of operator precedence to evaluate arithmetic expressions ▪ Evaluate expressions with roots and brackets ▪ Use a scientific calculator ▪ Use scientific units ▪ Recognise and avoid common errors in algebra ▪ Rearrange a simple formula ▪ Substitute numbers into a formula ▪ Solve a linear equation ▪ Solve a pair of linear simultaneous equations ▪ Solve a quadratic equation ▪ Solve a word problem ▪ Solve equations using logarithms and exponentials ▪ Find the equation of a straight line ▪ Convert degrees to radians and vice versa ▪ Solve a right-angled triangle ▪ Solve a non right-angled triangle ▪ Evaluate trigonometrical expressions ▪ Calculate areas and volumes