Unit Code: H640/01
Qual Name: A level Mathematics B (MEI)
Qual Title: MEI Pure Mathematics and Mechanics

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic
1	1	3	2	Mc Calculus	Reverse of differentiation, area under curve
1	2	3	3(PS)	Mg Coordinate geometry	Parallel and perpendicular lines, forming an equation
1	3	5	1	Ms Sequences and series	Expansions with rational powers
1	4	7	2	Mt Trigonometry	Use of identities, relationships and definitions
1	5	7	3(PS)	Ms Sequences and series	Use of standard formulae
1	6	7	1	Mt Trigonometry	$R\cos(\theta +/- \alpha)$ forms
1	7	8	2	Mt Trigonometry, Mc Calculus, Me Numerical methods	Radians, area of triangle, differentiation of trig functions, Newton-Raphson method
1	8	12	1	Mc Calculus	Finding and interpreting the solution of a differential equation
2	1	3	3(PS)	MF Rigid bodies	Equilibrium,moments
2	2	4	1	Mk Kinematics	Constant acceleration
2	3	4	3(PS)	Mk Kinematics	Graphs, calculus
2	4	7	1	My Projectiles	Simple problem solving
2	5	5	1	Mk Kinematics	Newton's laws
2	6	5	1	MF Forces	Equilibrium, resolving forces
2	7	14	2	MF Forces	Newton's laws
3	1	5	1	Mk Kinematics	Kinematics graphs
3	2	4	1	MF Forces	Rigid bodies in equilibrium
3	3	6	3(PS)	Mk Kinematics	Problem solving
3	4	11	1	MF Forces	Connected particles
3	5	11	3(M)	My Projectiles	Application of standard models
3	6	9	3(PS)	MF Forces	Equilibrium
4	1	2	1	Ma Algebra	Indices
4	2	3	1	Ma Algebra	Surds
4	3	3	2	Mv Vectors	Diistance between two points
4	4	5	1	Mc Calculus	Chain rule
4	5	6	1	Mf Functions	Factor theorem, quadratic equations
4	6	7	1	Mc Calculus	Finding the approximate value of an integral using rectangles and the trapezium rule
4	7	9	2	Mg Coordinate geometry	Parametric, differentiation, conversion to cartesian form
4	8	9	2	Mc Calculus	1st principles, application of the 2nd derivative

Question Set	Q.	Total Marks	AO	Spec Ref.	Topic
4	9	10	3(M)	Mt Trigonometry	Problem solving in context
5	1	3	1	Mf Functions	Factor theorem
5	2	2	1	Me Numerical methods	Change of sign
5	3	4	1	Mt Trigonometry	Trig equations, secant and tangent functions
5	4	6	2	Ms Sequences and series	Modelling
5	5	6	1	Mt Trigonometry, integration	Double angle formulae, integration of trig functions
5	6	8	1	Mc Calculus	Integration by parts, the natural logarithm function
5	7	14	3(PS)	Mg Coordinate geometry	Equation of a circle, area of sector
5	8	12	2	Mc Calculus,Ms Sequences and series	Chain rule, binomial expansion with rational n, trapezium rule
6	1	4	3(M)	Mk Kinematics	Newton's laws, constant acceeration
6	2	4	2	Mk Kinematics	Use of calculus
6	3	3	2	MF Rigid bodies	Moments
6	4	10	3(M)	My Projectiles	Problem solving, equation of a trajectory
6	5	7	1	MF Forces	Frictional force and contact force
6	6	17	3(PS)	Mk Kinematics	Problem solving, constat acceleration formulae