Unit Code: H240/02

Qual Name: A level Mathematics A

Qual Title: Pure Mathematics and Statistics

Question Set	Q. No	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required
1	1	7	1	1.02	Algebra & Functions	Quadratics
1	2	6	2	1.10	Vectors	Vector calculations and proof
1	3	4	2, 3(M)	1.02	Algebra & Functions	Models in context. Interpreting a graph.
1	4	4	2, 3(PS)	1.05	Trigonometry	Proving a trigonometric identity.
1	5	6	3(PS)	1.01	Proof	Disproof by counterexample.
1	6	13	3(PS)	1.06, 1.07	Exponentials & Logarithms, Differentiation	Exponential curves
1	7	7	3(PS)	1.08	Integration	Use of a definite integral to obtain an area.
2	1	8	1	2.04	Statistical Distributions	Using normal probabilities.
2	2	7	3(M)	2.05	Statistical Hypothesis Testing	Test for the proportion in a binomial distribution.
2	3	9	2, 3(M)	2.01, 2.05	Statistical Sampling, Statistical Hypothesis Testing	Obtaining a sample. Test for the mean of a normal distribution.
2	4	6	2	2.02, 2.05	Data Presentation and Interpretation, Statistical Hypothesis Testing	Correlation, outliers
2	5	11	2, 3(M)	2.03	Probability	Probability calculations. Conditional probability
2	6	12	3(PS)	2.04	Statistical Distributions	A normal model as an approximation to a binomial.
3	1	11	1	1.07, 1.08	Differentiation, Integration	Calculus skills
3	2	8	1	1.04	Sequences & Series	Binomial expansion
3	3	9	2, 3(PS)	1.03, 1.07	Coordinate Geometry in the x-y Plane, Parametric equations	Find a cartesian equation from parametri and application
3	4	5	3(M)	1.02, 1.06	Algebra & Functions, Exponentials & Logarithms	Modelling using exponential functions.
3	5	9	2, 3(PS)	1.02, 1.07	Algebra & Functions, Differentiation	Optimisation
3	6	4	2	1.01	Proof	Proof of a result about even positive integers.
3	7	5	3(PS)	1.02	Algebra & Functions	Solving a quartic using a given substitution.
4	1	6	1	2.02	Data Presentation & Interpretation	Stem-and-leaf diagram.
4	2	11	3(M)	2.04	Statistical Distributions	Probability using the normal distribution.

Question Set	Q.	Total Marks	AO	Spec Ref.	Topic	Question Subject, If required
4	3	7	3(M)	2.05	Statistical Hypothesis Testing	Test for the mean of a normal distribution.
4	4	8	2, 3(PS)	2.02, 2.05	Data Presentation & Interpretation, Statistical Hypothesis Testing	Bivariate data.
4	5	12	3(M)	2.04	Statistical Distributions	Probability calculations. Conditional probability.
4	6	5	3(M)	2.04	Statistical Distributions	A normal model as an approximation to a binomial.
5	1	9	1	1.07, 1.08	Differentation, Integration	Calculus skills
5	2	4	3(PS)	1.02	Algebra & Functions	Simplifying a rational expression.
5	3	7	3(PS)	1.04	Sequences & Series	Binomial expansion
5	4	5	2	1.05	Trigonometry	Solving a trigonometric equation.
5	5	5	2	1.01	Proof	Logical proof.
5	6	3	3(PS)	1.05	Trigonometry	Proving a trigonometric identity.
5	7	8	2	1.10	Vectors	Cartesian equation of a circle and vectors
5	8	9	3(M)	1.08	Integration	Differential equation with variables separable.
6	1	4	1	2.02	Data Presentation & Interpretation	Histogram
6	2	7	3(M)	2.05	Statistical Hypothesis Testing	Test for the proportion in a binomial distribution.
6	3	9	3(M)	2.02, 2.04	Data Presentation & Interpretation, Statistical Distributions	Probability with the normal distribution.
6	4	6	3(M)	2.05	Statistical Hypothesis Testing	Test for the mean of a normal distribution.
6	5	8	3(PS)	2.03	Probability	Mutually exclusive and independent events.
6	6	6	2	2.02	Data Presentation & Interpretation	Interpreting diagrams.
6	7	10	2	2.03, 2.04	Statistical Distributions, Probability	Understand a probability distribution defined as a formula.