FSMQ

Foundations of Advanced Mathematics (MEI)

Unit **6989:** Multiple Choice

Free Standing Mathematics Qualification

OCR Report to Centres January 2018

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This report on the examination provides information on the performance of candidates which it is hoped will be useful to teachers in their preparation of candidates for future examinations. It is intended to be constructive and informative and to promote better understanding of the specification content, of the operation of the scheme of assessment and of the application of assessment criteria.

Reports should be read in conjunction with the published question papers and mark schemes for the examination.

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The mean mark, at 30 was very similar to previous series. 3 candidates obtained 39 and the lowest mark was 11. The number of candidates not offering an answer in a question was well down this year.

In all questions except nine, each of the distracting responses was selected by at least one candidate.

In 5 questions the correct response was given by fewer than 50% of candidates and in 2 of these a higher proportion of candidates gave the incorrect response.

Q11 Statistics – displays

The correct response, D, was chosen by only 37% of candidates with the same proportion choosing B as the response. The cumulative frequency graph enables one to find the median and interquartile range. The way to display the data, being discrete, is by a vertical line graph.

Q12 – Probability

68% of candidates decided that the probability of a particular number showing on the Fred's spinner was $\frac{1}{5}$ and therefore, since the spins were independent and the probability for George was the same, the answer is the two multiplied together, giving $\frac{1}{25}$. This, of course, is the probability of both spinners showing a specific number and so this result needed to be multiplied by 5 to obtain the correct answer. Only 24% of candidates managed to do this.

Percentage obtaining the correct response	**Question**	**Topic**
91 – 100	2	Arithmetic – proportions and percentages
	3	Arithmetic – calculations
	4	Arithmetic – fractions
	6	Arithmetic – standard form
	7	Arithmetic – ratios
	13	Arithmetic – exponential growth
	22	Algebra – substitution
	29	Arithmetic – estimation of mass
	32	Algebra – identities
	33	Arithmetic – sensible units
	34	Algebra – sequences
81– 90	1	Arithmetic – definitions
	5	Arithmetic – Indices
	9	Arithmetic and trigonometry – 3D diagram
	14	Statistics – measures of central tendency and spread
	16	Algebra – simultaneous equations
	18	Algebra – algebraic fractions
	23	Vectors
	24	Algebra – substitution into equation
	25	Vectors
	26	Trigonometry – definitions
	28	Graphs – conversion graph
	36	Arithmetic – rounding
71– 80	8	Arithmetic – Mensuration
	10	Algebra – Solution of quadratic equations
	17	Algebra – solution of linear equations
	20	Algebra – quadratic factorisation
	27	Arithmetic – Scale drawing
	30	Graphs – velocity –time graph
	31	Graphs – coordinate geometry of straight lines
	40	Graphs – cubic curve.
61– 70	37	Arithmetic – scale drawing
51– 60	19	Algebra – linear inequalities
	38	Statistics – interpretation of diagram and sampling
	39	Statistics – interpretation of diagram
41– 50	15	Algebra – rearrangement of formulae
	21	Algebra – words into equations
	35	Trigonometry – sin and cosine formulae
31– 40	11	Statistics – diagrams
21– 30	12	Statistics – probability

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