

# Mark Scheme (Results) January 2011

GCE

GCE Applied ICT (6953/01)

The Knowledge Worker

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**Applied GCE ICT Unit 3 - Mark Scheme - Jan 2011**

Activity		ANSWER	POSS. MARK	MAX
<b>Activity 1</b>		<b>Understanding the problem</b>		
		<b>Any 11 of</b>		
	A1	Lyonair	1	
	A2	Passenger / Low Cost Airline (must be clear that this refers to Lyonair specifically)	1	
	A3	Aircraft cost £100,000,000 each	1	
	A4	4 aircraft	1	
	A5	4 routes	1	
	A6	Long Haul & Short Haul	1	
	A7	366 passengers max	1	
	A8	20kg baggage max	1	
	A9	Short haul (Paris and Madrid) daily	1	
	A10	long haul (others) twice a week	1	
	A11	300,000 flying hours	1	
	A12	Maintenance every 5000 hours	1	
	A13	6/8 staff per flight / or roles listed	1	
	A14	Canberra flight stops at Dubai	1	
				<b>11</b>
	B1	Price (per ticket)	1	
	B2	For each/all routes/flights	1	
				<b>2</b>
		<b>Total Marks for Activity 1</b>		<b>13</b>
<b>Activity 2</b>		<b>Sources of Information</b>		
		<b>Any 5 of</b>		
	A1	BAA	1	
	A2	No vested interest / independent	1	
	A3	Recognised source / Airstuff not recognised source	1	
	A4	BAA might use actual flight data (this could be inferred by 'planes travel are an arc not straight lines' / circling distances / flight plans) or Airstuff uses distance calculator which uses straight line distances.	1	
	A5	Not guesswork / pilots just guesswork	1	
	A6	Any other sensible reason	1	
		Candidates may identify that pilots_exam.txt and airstuff_exam.txt give the same distance values and therefore must be reliable.		
		<b>If BAA is not chosen up to 4 A6 marks can be awarded</b>		

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<b>Activity</b>	<b>ANSWER</b>	<b>POSS. MARK</b>	<b>MAX</b>
			5
	Any 4 of		
	<b>Accuracy of the data - and its use in predicting passenger numbers</b>		
	Any 4 of:		
B1	Some destinations more popular	1	
B2	Different periods more popular (school holidays)	1	
B3	Data may be old (people change views)	1	
B4	Different days may vary (may pay more at weekend than midweek)	1	
B5	Type of ticket bought	1	
B6	May be prepared to pay more (may have been willing to pay than they paid)	1	
B7	Valid concerns about data collection (award once)	1	
B8	Any other sensible reason	1	
			4
	Any 4 of		
C1	Staff	1	
C2	Fuel (Cost)	1	
C3	Airport Costs	1	
C4	Cost of plane	1	
C5	Maintenance	1	
			4
	<b>Total Marks for Activity 2</b>		<b>13</b>

<b>Activity 3</b>		<b>Computer Modelling</b>		
(a)		<b>Import Data</b>		
	A1	Worksheets created	1,1	
	A2	Data imported correctly Survey: Cost/km (row 18 £0.16, 366, 191) (Rows 1-20) Selected distance data: BAA 0,1264,5586/5252,16924,0 Pilots 0,1276,5591/5251,16352,0 Airstuff 0,1276,5591/5251,16352,0	1,1	
	A3	Suitable names for worksheets look at formula view printouts (survey data / distances data)	1,1	
				6
(b)		<b>Passengers (Formulae) Print: Columns A-C Rows 7-18</b>		
	B1	Correct Data	1	
	B2	Formula used	1	
				2
(c)		<b>Distances (Formulae) Print: Columns A-C Rows 6-12</b>		
	C1	Correct Data	1	
	C2	Formula used	1	
				2
(d)		<b>Fuel (Formulae) Print Columns A-G Rows 6-17</b>		
	D1	0.87 in Cell C6	1	
	D2	=F8*C6 in Cell G8	1	
	D3	C6 absolute Addressing F8*(\$C\$6 ignore F8	1	
	D4	No Sum used (must be working Formula in G8) i.e. gives right answer	1	
	D5	Replicated correctly (must have absolute addressing)	1	
				5
(e)		<b>Staff (Formulae) Print Columns E-F Rows 7-12</b>		
	E1	=C8/E8 in cell F8	1	
	E2	No Sum used (must be correct Formula) i.e. gives right answer	1	
	E3	Replicated correctly	1	
				3
(f)		<b>Weight (Formulae) Print Columns G-H Rows 7-17</b>		
	F1	Correct Formula in H8 (=Sum(D8:G8) or equivalent)	1	
	F2	Sum used	1	
	F3	Replicated correctly	1	
				3
(g)		<b>CostRevenue (Formulae) Print Columns M-N Rows 7-18 (allow L-N)</b>		
	G1	Correct Formula in M8 (=G8-L8)	1	
	G2	Replicated correctly	1	
	G3	Formula in N8 works out weekly profit	1	

	G4	Correct If Statement in N8 (=IF(D8="Short Haul",M8*7,M8*2)) or alternative (=IF(D8="Short Haul", 7,2)M8)	1	
	G5	Formula replicated correctly (award if formula can be replicated)	1	
	G6	Total in N18 correct (=SUM(N8:N17))	1	
	G7	M and N, 7-18 <b>only</b> printed (needed to unmerge)	1	
				7

		CostRevenue (Data)		
	H1	Solution shown	1	
	H2	profit	1	
	H3	>=£1,000,000 profit	1	
	H4	>=£1,500,000 profit	1	
	H5	>=£1,750,000 profit	1	
	H6	>=£2,000,000 profit	1	
	H7	>=£2,400,000 profit	1	
		Do not award H2 to H6 if you feel a wrong advantageous formula has been entered		
				7
		Printouts		
	J1	All required printouts (9)	1	
	J2	In right order (>5 prints)	1	
	J3	Row & Column headings on all (>5 prints)	1	
	J4	Gridlines on all (>5 prints)	1	
	J5	Correct header & footer (>5 prints)	1	
	J6	Correct rows printed (>5 prints) must have J3	1	
	J7	Correct columns printed (>5 prints) must have J3	1	
				7
		<b>Total Marks for Activity 3</b>		<b>42</b>

Activity 4	Report		
<p>Indicative content</p> <p>In report format, not a memo or a letter. ( Limited to Level 2 if not a report.)</p> <p>Suitable title e.g. report to the management of Lyonair.</p> <p>Introduction including statement of decisions.</p> <p>Recommended prices in a table.</p> <p>Justification of recommendation - should mention profit, or issues such as filling up every plane to reduce carbon footprint.</p> <p>Factors that might impact on profitability:</p> <ul style="list-style-type: none"> <li>• Popularity of route</li> <li>• Weather and other issues</li> <li>• Fuel costs</li> <li>• Industrial action</li> <li>• Credit crunch</li> <li>• Government taxes</li> <li>• Exchange rates.</li> </ul> <p>Chart or graph:</p> <ul style="list-style-type: none"> <li>• Relevant</li> <li>• Used in justification of recommendation</li> <li>• Labelled including correct axes</li> <li>• Chart fit for purpose</li> </ul> <p>Conclusion is a summary of recommendations.</p>			
Level	Marks		

Level 0	0 marks	No rewardable content
Level 1	1-5	<p>The report shows a recommendation although this may not be justified and may be shown in an unclear way. The candidate has included a chart although this may not be relevant to the report.</p> <p>The candidate uses everyday language and the response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.</p>
Level 2	6-10	<p>The report shows a recommendation which is clear, complete and perhaps in a table. The candidate has supplied a chart which is relevant to the report but what the chart shows may not be clear. Some attempt has been made to supply profitable recommendations in report form with limited headings.</p> <p>Some reference to factors impacting on profitability.</p> <p>The candidate uses some specialist terms and shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.</p>
Level 3	11-15	<p>The report is set out in a clear way using headings and sub headings. The recommendations are made clearly and probably in a table and the chart(s) supplied are relevant, well labeled and add to the content of the report. The recommendations would lead to a clear profit. They have mentioned several factors not taken into account in the model which may affect profitability.</p> <p>The candidate uses a range of appropriate specialist terms and shows good focus and organisation. Spelling, punctuation and the rules of grammar used with considerable accuracy.</p>
		<b>Total Marks for Activity 4</b>
		<b>15</b>



<b>Activity 5</b>		<b>Evaluation</b> <b>Any 1 of</b>		
	A1	Comment on ease of use	<b>1</b>	
	A2	Statement to the effect that it helped you to a solution	<b>1</b>	
				<b>1</b>
		<b>Max 4 marks (Any combination of)</b>		
	B1	Recommendations for improvement e.g. Take into account interest for bank loan.	<b>1</b>	
	B2	Recommendations for improvement with any explanation e.g. As bank will want to be paid for lending you the money. Or Recommendations for improvement with how to do this.	<b>2</b>	
	B3	Recommendations for improvement with formulae New column on plane stats = $B5*(1+rate)$	<b>4</b>	
		Other ideas that could be explored <ul style="list-style-type: none"> <li>• Carbon footprint</li> <li>• Salary changes</li> <li>• Residual value of aircraft</li> <li>• Cost of fuel in different countries</li> <li>• Exchange rate</li> <li>• Facilities on plane</li> <li>• Any sensible suggestion related to the scenario</li> </ul>		
				<b>4</b>
		<b>Total Marks for Activity 5</b>		<b>5</b>
<b>SWW</b>				
	S1	Authenticating Work (All WP pages have task number, Name, centre number).	<b>1</b>	
	S2	Appropriate Structure (Pages in correct order & Folder assembled correctly)	<b>1</b>	
		<b>Total for SWW</b>		<b>2</b>
		<b>Total for Paper</b>		<b>90</b>

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