Pearson Edexcel

Mark Scheme (Results)

Summer 2019

Pearson Edexcel Applied International Advanced Level

In Information Communication Tecnology (ICT) (WIT04) Paper 01 : Work with Database Software

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General Marking Guidance

- All candidates must receive the same treatment. Examiners must mark the first candidate in exactly the same way as they mark the last.
- Mark schemes should be applied positively. Candidates must be rewarded for what they have shown they can do rather than penalised for omissions.
- Examiners should mark according to the mark scheme not according to their perception of where the grade boundaries may lie.
- There is no ceiling on achievement. All marks on the mark scheme should be used appropriately.
- All the marks on the mark scheme are designed to be awarded. Examiners should always award full marks if deserved, i.e. if the answer matches the mark scheme. Examiners should also be prepared to award zero marks if the candidate's response is not worthy of credit according to the mark scheme.
- Where some judgement is required, mark schemes will provide the principles by which marks will be awarded and exemplification may be limited.
- When examiners are in doubt regarding the application of the mark scheme to a candidate's response, the team leader must be consulted.
- Crossed out work should be marked UNLESS the candidate has replaced it with an alternative response.

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		ANSWER		POSS. MARK	MAX
Activity 1		**Understanding the problem**			
		Step	*Process*		
	A1	2	G	**1**	
	A2	3	C	**1**	
	A3	5	H	**1**	
	A4	6	F	**1**	
	A5	7	B	**1**	
	A6	8	D	**1**	
					(6)
				Total for Activity 1	**6**

Process	Description
A	Maureen uses the Internet to find schools that are not already part of the programme.
G	When Maureen finds schools not already taking part, she adds the school name and email address to the list she keeps.
C	Maureen opens her 'recruitment' email where she introduces herself and the walk programme. She adds the school's email address.
E	The "recruitment" email is sent.
H	Maureen adds a tick next to each school's details so she knows a "recruitment" email has been sent.
F	Email responses are received from schools wishing to take part with details of the student attached.
B	On receipt of the email response, Maureen adds the name of the school to those taking part in the programme.
D	When a new school is added to the programme, she opens her 'walks information' email and adds their email address. This email provides details of walks for the year. The 'walks information' email is sent.
I	After the email has been sent, Maureen adds the details of the school and students to her list of walkers.

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Activity 2		Structure		
a)	**A1**	School (table)	**1**	
	A2	Student (table)	**1**	
	A3	Leader (table)	**1**	
	A4	Walk (table)	**1**	
	A5	Registration (table)	**1**	
	A6	1:M School - Student **(A1-A2)**	**1**	
	A7	1:M Leader - Walk **(A3-A4)**	**1**	
	A8	1:M Student – Registrations **(A2-A5)**	**1**	
	A9	1:M Walk – Registrations **(A4-A5)**	**1**	
				(9)
b)		**Data Types**		
	B1	Evidence of correct primary keys Table School - SchoolID Table Student – StudentID Table Leader – LeaderID Table Walk – WalkID	**1**	
	B2	Table Registrations – **WalkID**, **StudentID** as composite key	**1**	
	B3	Evidence of correct data types **Min of 1 Date/Time, 1 Number, 1 Yes/No** WalkDate - Date/Time Attended – Yes/No Difficulty – Number Distance - Number Min of 1 Date/Time, 1 Number, 1 Yes/No	**1**	
				(3)
c) (i)	**C1**	Postcode format check. >LL0\ 0LL or LL0\ 0LL	**1**	
(ii)	**C2**	Any suitable presence check Unsuitable are: Any primary keys	**1**	

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(iii)	**C3**	Any suitable range check **Distance(km)** Between 10 and 19 >=10 and <=19 >9 and <20 **Difficulty** Between 1 and 5 >=1 and <=5 >0 and <6	**1**	**C**
(iv)	**C4**	Any suitable table lookup or value lookup Foreign or part composite key only Student table – SchoolD Walk table – LeaderID Registrations table – WalkID Registrations table – StudentID MUST have: limit to list yes	**1**	
d)				**(4)**
	D1	School **9**	**1**	
	D2	Student – **84**	**1**	
	D3	Walk – **17**	**1**	
	D4	Leader – **11**	**1**	
	D5	Registrations – **1378**	**1**	
				(5)
		Total marks for Activity 2		**21**

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Activity 3				
a)		**New walk form**		
(i)	**A1**	Fields include (from any view) Walkname Walk Date Difficulty Distance(km) LeaderID	**1**	
				(1)
(ii)	**A2**	WalkID (design view) Any formula/method that is correct =Max(WalkID)+1 Or = DMax("WalkID", "tblWalk")+1 Or sorted into descending order then WalkID+1 Or WalkID (form view) Screenprint clearly showing WalkID as (New) Or Screenprint of table showing WalkID as autonumber	**1**	
				(1)
(iii)		**Customisation (any view)**		
	A3	**Any one from** Suitable title Suitable labels Field widths Instructions Asterisks Combo box for LeaderID Combo box for Distance(km) Combo box for Difficulty	**1**	
				(1)

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b)		**Saving walk**		
(i)	**B1**	Check to ensure at least two from: Walkname Difficulty Distance(km) WalkDate LeaderID are present	**1**	
	B2	Check to ensure walk is on a Sunday	**1**	
	B3	Check to ensure walk has not already taken place on that date	**1**	
	B4	Check to make sure the difficulty is not out of range Or The distance is not out of range	**1**	
	B5	Walk saved All fields must be shown in Query in full **and** Query used in Macro	**1**	
				(5)
		Generating walk registrations		
(ii)	**B6**	All StudentIDs would be appended Or Correct WalkID would be appended	**1**	
	B7	Attendance would be automatically set to Yes	**1**	
	B8	Append takes place after Walk has been appended	**1**	
				(3)
c)		**Searching for Student section**		
(i)	**C1**	Title and instructions as given	**1**	
	C2	Date is a combo box	**1**	
	C3	Only the walk dates from the walk table are used as the source of the combo box	**1**	
	C4	Last name, first name, school name and Search button present as given	**1**	
				(4)

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(ii)		**Student Search Query**		
	C5	One from: WalkID/WalkDate, StudentID, StudentFirstname, StudentLastname, SchoolName correctly linked to form	**1**	
	C6	All of the above correctly linked to form	**1**	
				(2)
(iii)		**Student Search subform**		
	C7	Layout is as shown in Figure 1 for Date and Student information	**1**	
	C8	Query shown as source of subform	**1**	
	C9	Subform has correct fields StudentID, StudentLastname, StudentFirstname, SchoolName, Attended	**1**	
	C10	StudentID, StudentLastname, StudentFirstname and SchoolName shown as disabled	**1**	
				(4)
(iv)		**Search Button**		
	C11	Check made to ensure date selected	**1**	
	C12	One from: Last name, first name, school name defaulted to wildcard (*) if no data entered	**1**	
	C13	Subform is refreshed to show results of query	**1**	
				(3)
(v)		**Attendance Update Query**		
	C14	WalkID/WalkDate correctly linked to WalkID/WalkDate on search section of form OR StudentID correctly linked to StudentID on subform	**1**	
	C15	Attendance would update correctly	**1**	
				(2)
(vi)		**Attendance Field**		
	C16	Update query runs on After Update or Click event of Attended field	**1**	
				(1)
		Total marks for Activity 3		**27**

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<table>
<tr><td colspan="2">Activity 4</td><td>Testing</td><td></td><td></td></tr>
<tr><td>a)</td><td></td><td>Create Walk and Registrations form</td><td></td><td></td></tr>
<tr><td></td><td>A1</td><td>Details correct<table><tr><td>WalkName</td><td>Washington Circular</td></tr><tr><td>WalkDate</td><td>05/05/2019</td></tr><tr><td>Difficulty</td><td>2</td></tr><tr><td>Distance(km)</td><td>14</td></tr><tr><td>LeaderID</td><td>3</td></tr></table></td><td>1</td><td></td></tr>
<tr><td></td><td>A2</td><td>Fields shown above correctly stored (must agree with data entered on form and have WalkID of at least 18)</td><td>1</td><td></td></tr>
<tr><td></td><td>A3</td><td>At least ten new registrations shown in table (WalkID must match A2)</td><td>1</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td>(3)</td></tr>
<tr><td>b)</td><td></td><td>Walk Date not a Sunday</td><td></td><td></td></tr>
<tr><td></td><td>B1</td><td>Date is not a Sunday and suitable error message shown</td><td>1</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td>(1)</td></tr>
<tr><td>c)</td><td></td><td>Walk Date has already been used</td><td></td><td></td></tr>
<tr><td></td><td>C1</td><td>Any of these dates and suitable error message shown
06/01/2019
13/01/2019
20/01/2019
27/01/2019
03/02/2019
10/02/2019
17/02/2019
24/02/2019
03/03/2019
10/03/2019
17/03/2019
24/03/2019
31/03/2019
07/04/2019
14/04/2019
21/04/2019
28/04/2019
05/05/2019</td><td>1</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td>(1)</td></tr>
</table>

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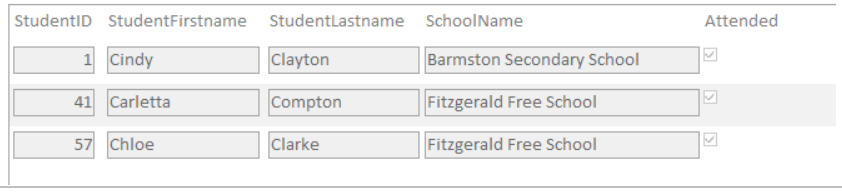
d)		**Difficulty out of range**		
	D1	Difficulty <1 or >5 and suitable error message shown	**1**	
				(1)
e)		**Distance(km) out of range**		
	E1	Distance(km)<10 or >19 and suitable error message shown	**1**	
				(1)
f)		**Search form**		
(i)	**F1**	Select the date 28/04/2019 Enter Lastname: C* Enter Firstname: C* Enter School name:	**1**	
				(1)
(ii)	**F2**	SchoolName defaulted to *	**1**	
	F3	Correct records shown on subform  	**1**	
				(2)
(iii)	**F4**	Correct details on subform Attended shows no for StudentID 57	**1**	
	F5	Registration record correct StudentID: 57 WalkID: 17 Attended: No	**1**	
				(2)
		Total marks for Activity 4		**12**

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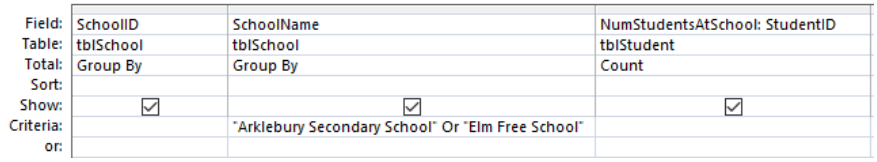
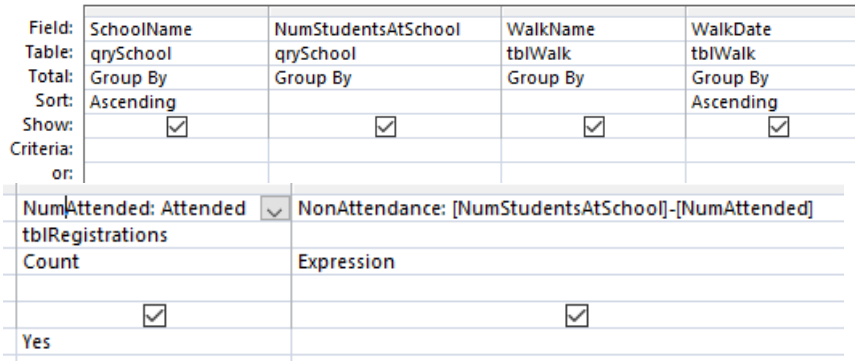
Activity 5				
a)		**School and Number Students query**  		
	A1	SchoolID, SchoolName and generated field only included in query	1	E
	A2	Students correctly counted on SchoolID, SchoolName or StudentID	1	C
	A3	Suitable name for generated field	1	A
	A4	Criteria correct	1	C
				(4)
b)		**Walk Attendance query**  		
	B1	NumStudentsAtSchool sourced from the query produced in (a).	**1**	C
	B2	Attendance calculated correctly	**1**	C
	B3	NonAttendance calculated correctly	**1**	A
	B4	Ascending order of SchoolName followed by ascending order of WalkDate	**1**	C
				(4)

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c)

Attendance report

Attendance by School

Arklebury Secondary School

Number Students At School 7

Walk Name	Date	Attendance	NonAttendance
Bracken Way	17/03/2019	7	0
Burns Trail	03/02/2019	7	0
Falls of Glo	03/03/2019	7	0
Forest Trail	21/04/2019	7	0
Galdys Way	07/04/2019	7	0
John Muir Way	31/03/2019	7	0
Kerry Ridge	13/01/2019	7	0
Leeds Canal	27/01/2019	6	1
Mourne hills	06/01/2019	7	0
North Way	24/03/2019	7	0
Roman Way	10/03/2019	7	0
Six Sisters	17/02/2019	7	0
South West Coast Path	14/04/2019	7	0
St Cutherbert's Walk	10/02/2019	6	1
Tramway Trail	20/01/2019	7	0
Walberswick nature reserve	24/02/2019	7	0
Whinniey Track	28/04/2019	6	1

Elm Free School

Number Students At School 9

Walk Name	Date	Attendance	NonAttendance
Bracken Way	17/03/2019	9	0
Burns Trail	03/02/2019	9	0
Falls of Glo	03/03/2019	9	0

	C1	Information Layout matches design: Title where it should be Number Students At School where it should be Labels sensible	**1**	E
	C2	Layout of fields matches design	**1**	C
				(2)
		Total marks for Activity 5		**10**

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Activity 6	Evaluation

Note: Place student in correct mark band based on content.
QWC adjustment can only reduce mark within band. This must be based on the expectation within the mark band. Marks cannot be added and the adjustment cannot put the mark in a different mark band.

Indicative content

The new walk and walk registration form

How user friendly the form is

Should be discussing

- their layout
- logical placing of fields
- instructions
- automatic generation of WalkID
- validation applied and how useful
- automatic generation of registrations for all students

Testing the Search and Update attendance form

Should be discussing

- Test data chosen for 4b (Sunday), 4c date already used, 4d difficulty out of range, 4e distance out of range
- Other tests that would need to be carried out, For example:
    - New walks not being allowed to be in the past
    - Below, on, in and above for ranges
- Reasons why
    - Would not be sensible to allow walks in the past
    - Cannot guarantee range works as it should if only one out of range check has taken place.

Future Proofing

Prototype development

Should be discussing walks and walk registrations only.

- Would not cope very well. Each walk has a specific date so if the same walks were going to be carried out next year then the dates would have to be deleted and re-entered and the registration table would need emptying ready for new walks.
- Each walk also has a specific leader attached to it. They may not lead that walk in 2020 so that data would need deleting too.
- Could remove WalkDate and LeaderID from the Walk table and introduce a new link table between the Walk and Registrations table. Named something like WalkDates
- WalkDates would have primary key of WalkID and WalkDate
- WalkDates would have a foreign key of LeaderID
- Primary key in Registrations table would change to a three-part composite key; WalkID and WalkDate to ensure a 1:M with WalkDates and StudentID.

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Level	Mark	**Descriptor**
0	0	No rewardable material.
Level 1	1-4	Description of what candidate did during tasks (possibly using screenshots) Description of what candidate did not manage to complete or what does not work. Ideas in terms of future proofing may not be sensible or entirely make sense, or may not relate to the question. Evaluative comments limited. The candidate uses everyday language and the response lacks clarity and organisation. Spelling, punctuation and the rules of grammar are used with limited accuracy.
Level 2	5-8	Candidate may address some points. Candidate may discuss walk and walk registration form and/or search and updating attendance form. Candidate will discuss usability aspects and how their solution makes it easier for the user May be descriptive in places but, will be evaluative on the whole. Candidate may discuss testing of the walk and walk registration form or testing/potential testing of the search and updating attendance form. Future proofing will have some attempt made to link it to question, i.e. walk and walk registrations only and changes to those two tables only. May not be entirely sensible but will be relevant. The candidate uses some terms and shows some focus and organisation. Spelling, punctuation and the rules of grammar are used with some accuracy.
Level 3	9-12	Will be evaluative throughout. In terms of walk and walk registration form will address the same points as in MB2 but will be fully evaluative throughout. Good reasons for testing given. Future proofing will be sensible. The candidate uses a range of appropriate terms and shows good focus and organisation. Spelling, punctuation and the rules of grammar used with considerable accuracy.

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SWW1		Administration details on each page	**1**	
SWW2		Required printouts **only** assembled correctly	**1**	
		Total Marks for Standard ways of working		**2**
		Total marks for Paper		**90**

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