



**Pearson**  
**Edexcel**

## **Mark Scheme**

### **Additional Sample Assessment Materials**

Pearson Edexcel International Advanced  
Subsidiary/Advanced Level in Information  
Technology

Unit 4 (WIT14)

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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.

## Unit 4 Additional Sample Material – Mark Scheme

### Note to examiners

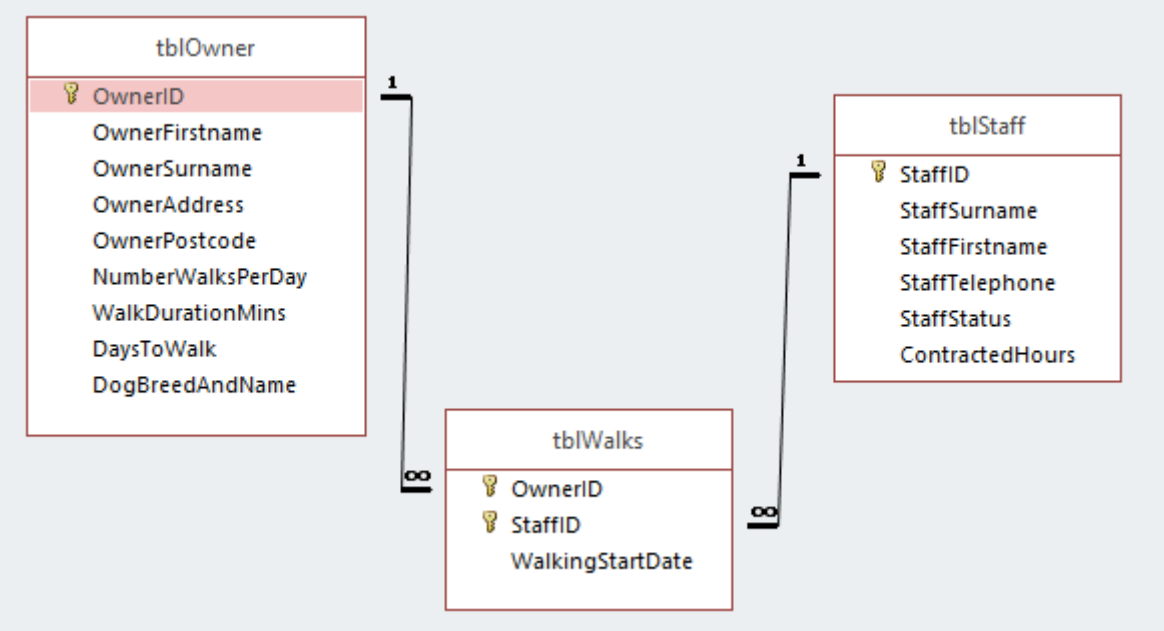
Where example screenshots are included, these are indicative content only and not a definitive answer. Students should receive credit based on the marking instructions in the answer column.

Question number	Answer	Additional Guidance	Mark
1(a)i	Suitable input mask or validation rule for OwnerPostcode Input mask >LLO\ 0LL		1
1(a)ii	Award <b>one</b> mark for each of: <ul style="list-style-type: none"><li>• Range check added to NumberWalksPerDay field (1)</li><li>• Range is correct<ul style="list-style-type: none"><li>Between 1 and 3</li><li>&gt;0 and &lt;4</li><li>&gt;=1 and &lt;=3 (1)</li></ul></li><li>• Validation text provides suitable error message (1)</li></ul>		3

Question number	Answer	Additional Guidance	Mark
1(b)	<p>Award <b>one</b> mark for each of:</p> <ul style="list-style-type: none"> <li>• Data entry form displayed is empty (1)</li> <li>• All fields from owner table included in form (1)</li> <li>• OwnerID is disabled (1)</li> <li>• <b>One</b> from: <ul style="list-style-type: none"> <li>○ Form labels are appropriate (not database field names)</li> <li>○ Form has meaningful title</li> <li>○ Entry boxes on form are resized appropriately to reflect the data they will be used to enter (1)</li> </ul> </li> <li>• WalkDurationMinutes correctly generated, <b>one</b> from: <ul style="list-style-type: none"> <li>○ 1 walk – iif(NumberWalksPerDay = 1,60)</li> <li>○ 2 walks - iif(NumberWalksPerDay = 2,30)</li> <li>○ 3 walks - iif(NumberWalksPerDay = 3,20)(1)</li> </ul> </li> <li>• WalkDurationMinutes for all three walks correctly generated Iif(NumberWalksPerDay = 1,60,iif(NumberWalksPerDay = 2,30,20)) (1)</li> <li>• Button present (1)</li> <li>• Code/macro to save data to the table <ul style="list-style-type: none"> <li>○ At least 3 presence checks from: <ul style="list-style-type: none"> <li>▪ OwnerSurname</li> <li>▪ OwnerAddress</li> <li>▪ OwnerPostcode</li> <li>▪ NumberWalksPerDay</li> <li>▪ DaysToWalk</li> <li>▪ DogBreedAndName (1)</li> </ul> </li> </ul> </li> <li>• Record would save in the correct table (1)</li> </ul>		9

Question number	Answer	Additional Guidance	Mark
1(c)	<p><b>Indicative content</b></p> <p><i>Factors to consider</i></p> <ul style="list-style-type: none"> <li>• selecting/omitting fields</li> <li>• appropriate help text</li> <li>• meaningful error messages</li> <li>• sensible and meaningful data entry field names</li> <li>• data entry features</li> <li>• dropdown</li> <li>• restricting editing</li> <li>• intuitive layout</li> </ul> <p><i>Consideration and significance</i></p> <p>Assessment of how well their data input form uses interface components that support users and judgements about their significance/importance</p> <ul style="list-style-type: none"> <li>• good title so user can easily identify what the form is used for</li> <li>• clear instructions telling the user how to use the form so reduces likelihood of data entry errors and makes it easier to use from the start</li> <li>• logical grouping of fields so that related information is grouped together</li> <li>• labels have spaces etc to make them clear to read</li> <li>• asterisks to show where data entry should occur to ensure completion of all information</li> <li>• drop down box for number of walks so impossible to enter an invalid number</li> <li>• drop down box for days to walk so impossible to enter an invalid number</li> <li>• walk duration automatically calculated so no chance of incorrect calculation</li> <li>• field width appropriate to data that will be shown/entered so not to waste space on the form and give an indication of the length of data to be entered</li> <li>• OwnerID automatically generated to prevent duplicates/or having to look in the table to see what the next ID should be</li> <li>• disabled fields to prevent accidental amendments/deletion of data</li> <li>• tab order of fields if the user does not wish to use the mouse or to miss out disabled fields</li> <li>• clear indication of what the button will do so that the user knows the process of saving is automatic</li> </ul>		9

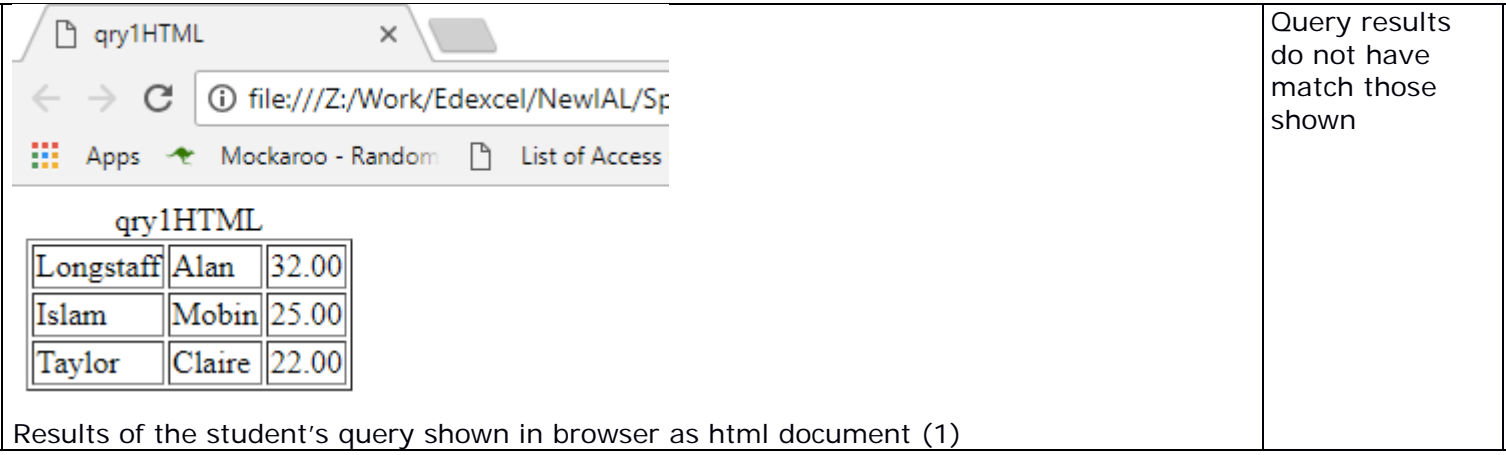
Level	Mark	Descriptor
	0	No Awardable content
Level 1	1-3	<ul style="list-style-type: none"> <li>• Applies understanding with limited coherence, showing limited understanding of the given issue.</li> <li>• Assessment of solution is superficial or unbalanced, and judgements lack support from evidence.</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Applies understanding to make some coherent connections, showing some understanding of the given issue.</li> <li>• Assessment of solution is partially developed, but this may be unbalanced, using evidence to support some judgements.</li> </ul>
Level 3	7-9	<ul style="list-style-type: none"> <li>• Applies understanding coherently, showing a thorough understanding of the given issue.</li> <li>• Assessment of solution is balanced and developed, using evidence to support judgements throughout.</li> </ul>

Question number	Answer	Additional Guidance	Mark
1(d)	 <p>Award <b>one</b> mark for each of:</p> <ul style="list-style-type: none"> <li>• Use of appropriate field names and naming conventions (1)</li> <li>• Staff table is present (1)</li> <li>• Walk table is present (1)</li> <li>• 1:M relationship between Owner – Walks (1)</li> <li>• 1:M relationship between Staff – Walks (1)</li> <li>• Appropriate Primary Key used for Staff table – StaffID (1)</li> <li>• Composite key used in Walks table – OwnerID and StaffID (1)</li> <li>• Date/time is used for WalkingStartDate (1)</li> <li>• Any integer data type is used for ContractedHours (1)</li> </ul>		9

Question number	Answer	Additional Guidance	Mark
1(e)	<p>Award <b>one</b> mark for each of:</p> <ul style="list-style-type: none"> <li>Suitable length check applied to any text field (1)</li> <li>Value lookup used for StaffStatus Combo box "full time"; "part time" (1)</li> <li>One table lookup used in Walk table: StaffID - Staff table OwnerID - Owner table (1)</li> <li>Limit to list set to 'yes' on table lookup (1)</li> </ul>		4
1(f)	<p>Award <b>one</b> mark for each of:</p> <ul style="list-style-type: none"> <li>Staff table – 6 records (1)</li> <li>Walk table – 36 records (1)</li> </ul>		2
<b>Total for question</b>			<b>37</b>

Question number	Answer	Additional Guidance	Mark																																				
2(a) (i)	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> <p style="text-align: center;">tblStaff</p> <hr/> <p style="text-align: center;">*</p> <p>🔑 StaffID  StaffSurname  StaffFirstname  ContractedHours  StaffStatus</p> </div> <table border="1"> <tr> <td>Field:</td> <td>StaffID</td> <td>StaffSurname</td> <td>StaffFirstname</td> <td>ContractedHours</td> <td>StaffStatus</td> </tr> <tr> <td>Table:</td> <td>tblStaff</td> <td>tblStaff</td> <td>tblStaff</td> <td>tblStaff</td> <td>tblStaff</td> </tr> <tr> <td>Sort:</td> <td></td> <td></td> <td>Ascending</td> <td>Descending</td> <td></td> </tr> <tr> <td>Show:</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>Criteria:</td> <td></td> <td></td> <td></td> <td></td> <td>"Part Time"</td> </tr> <tr> <td>or:</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> <p>Award <b>one</b> mark for each of:</p> <ul style="list-style-type: none"> <li>• Correct table <b>ONLY</b> (1)</li> <li>• Appropriate fields included in query  (StaffSurname, StaffFirstname, ContractedHours) if criteria for ContractedHours  <b>Or</b>  (StaffSurname, StaffFirstname, StaffStatus) if criteria for StaffStatus (1)</li> <li>• StaffStatus field uses correct criteria  "part-time"  &lt;&gt;"full-time"  <b>Or</b>  ContractedHours field uses correct criteria  &lt;40  &lt;33  &lt;=32 (1)</li> <li>• Only appropriate fields displayed (1)</li> <li>• ContractedHours has descending sort (1)</li> <li>• StaffFirstname has ascending sort (1)</li> <li>• Correct nesting of sorts StaffFirstname within ContractedHours (1)</li> </ul>	Field:	StaffID	StaffSurname	StaffFirstname	ContractedHours	StaffStatus	Table:	tblStaff	tblStaff	tblStaff	tblStaff	tblStaff	Sort:			Ascending	Descending		Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Criteria:					"Part Time"	or:							7
Field:	StaffID	StaffSurname	StaffFirstname	ContractedHours	StaffStatus																																		
Table:	tblStaff	tblStaff	tblStaff	tblStaff	tblStaff																																		
Sort:			Ascending	Descending																																			
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																		
Criteria:					"Part Time"																																		
or:																																							

2(a)(ii)



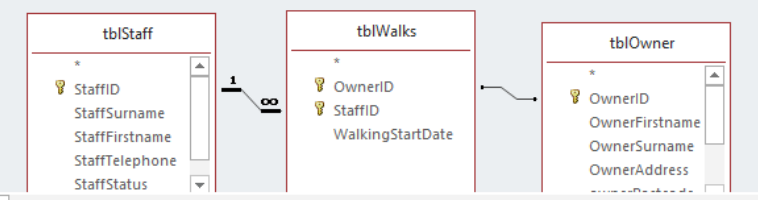
The screenshot shows a browser window with a single tab titled 'qry1HTML'. The address bar contains the file path 'file:///Z:/Work/Edexcel/NewIAL/Sp'. Below the address bar, there are navigation icons and a search bar. The main content area displays the text 'qry1HTML' above a table with three rows and three columns. The table data is as follows:

Longstaff	Alan	32.00
Islam	Mobin	25.00
Taylor	Claire	22.00

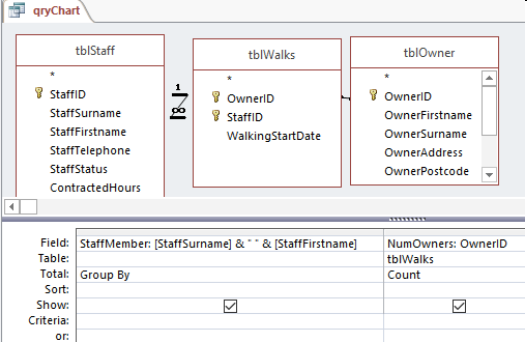
Results of the student's query shown in browser as html document (1)

Query results do not have match those shown

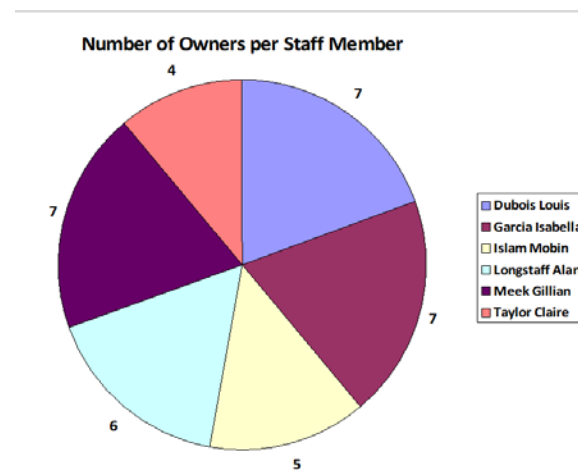
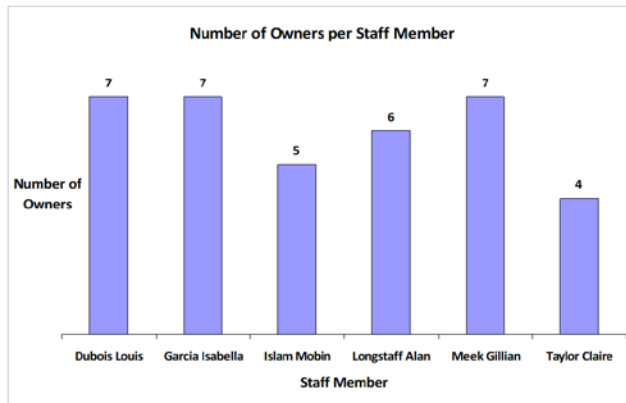
1

Question number	Answer	Additional Guidance	Mark																																				
2(b)(i)	<p>Relationships qryReport</p>  <table border="1"> <tr> <td>Field:</td> <td>Owner: [OwnerFirstname] &amp; " " &amp; [OwnerSurname]</td> <td>OwnerAddress</td> <td>ownerPostcode</td> </tr> <tr> <td>Table:</td> <td>tblOwner</td> <td>tblOwner</td> <td>tblOwner</td> </tr> <tr> <td>Total:</td> <td>Group By</td> <td>Group By</td> <td>Group By</td> </tr> <tr> <td>Sort:</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Show:</td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </table> <table border="1"> <thead> <tr> <th>WalksPerDay</th> <th>WalkDurationMins</th> <th>DaysToWalk</th> <th>WeeklyCost: 15*[DaysToWalk]</th> </tr> </thead> <tbody> <tr> <td>tblOwner</td> <td>tblOwner</td> <td>tblOwner</td> <td></td> </tr> <tr> <td>Group By</td> <td>Group By</td> <td>Group By</td> <td>Expression</td> </tr> <tr> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> <td><input checked="" type="checkbox"/></td> </tr> </tbody> </table> <p> StaffSurname  tblStaff  Group By  <input type="checkbox"/>  [Enter surname of the staff member you want to find] </p> <p>Award <b>one</b> mark for each of:</p> <ul style="list-style-type: none"> <li>• Correct related tables added (staff, owner and walks) (1)</li> <li>• Staff member uses parameter(s) e.g. Surname: [ ] Firstname: [ ] StaffID: [ ] (1)</li> <li>• Sensible parameter message e.g. Surname: [Enter staff surname] Firstname: [Enter staff first name] StaffID: [Enter staff ID] (1)</li> <li>• Correct expression used to calculate weekly cost - Expression – 15*DaysPerWeek <b>Or</b> DaysPerWeek*15 (1)</li> <li>• Weekly cost has suitable field name (1)</li> </ul>	Field:	Owner: [OwnerFirstname] & " " & [OwnerSurname]	OwnerAddress	ownerPostcode	Table:	tblOwner	tblOwner	tblOwner	Total:	Group By	Group By	Group By	Sort:				Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	WalksPerDay	WalkDurationMins	DaysToWalk	WeeklyCost: 15*[DaysToWalk]	tblOwner	tblOwner	tblOwner		Group By	Group By	Group By	Expression	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		5
Field:	Owner: [OwnerFirstname] & " " & [OwnerSurname]	OwnerAddress	ownerPostcode																																				
Table:	tblOwner	tblOwner	tblOwner																																				
Total:	Group By	Group By	Group By																																				
Sort:																																							
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																				
WalksPerDay	WalkDurationMins	DaysToWalk	WeeklyCost: 15*[DaysToWalk]																																				
tblOwner	tblOwner	tblOwner																																					
Group By	Group By	Group By	Expression																																				
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>																																				

Question number	Answer	Additional Guidance	Mark										
2(b)(ii)	<p style="text-align: center;"><b>Weekly Invoice</b></p> <hr/> <p style="text-align: center;"><b>Owner:</b> Anita Ali <b>Address:</b> 2 Cornwall Avenue DL8 9RX</p> <p style="text-align: center;"><b>Invoice Date:</b> 17/03/2018</p> <p style="text-align: center;">Your weekly dog walking payment is now due.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Number of walks per day:</td> <td style="text-align: right;">2</td> </tr> <tr> <td>Duration of each walk:</td> <td style="text-align: right;">30 minutes</td> </tr> <tr> <td>Number of days:</td> <td style="text-align: right;">3</td> </tr> <tr> <td>Cost per day:</td> <td style="text-align: right;">£15.00</td> </tr> <tr> <td>Weekly cost:</td> <td style="text-align: right;">£45.00</td> </tr> </table> <p style="text-align: center;">Please pay within 7 days.</p> <p style="text-align: center;">Thank you for your continued custom.</p> <p style="text-align: center;">Mobin</p> <hr/> <p>Award <b>one</b> mark for each of:</p> <ul style="list-style-type: none"> <li>• Title is in the page header – <b>mark from design view only</b> (do not accept title in detail section) (1)</li> <li>• Layout is as given with no truncation (1)</li> <li>• Standard text and labels are as given (1)</li> <li>• Today's date automatically generated (1)</li> <li>• Page break forced in suitable location (e.g. detail section) (1)</li> <li>• Monetary amounts display with currency and 2 decimal places (1)</li> </ul>	Number of walks per day:	2	Duration of each walk:	30 minutes	Number of days:	3	Cost per day:	£15.00	Weekly cost:	£45.00	Accept any currency format. Accept any date format.	<b>6</b>
Number of walks per day:	2												
Duration of each walk:	30 minutes												
Number of days:	3												
Cost per day:	£15.00												
Weekly cost:	£45.00												
<b>Total for question</b>			<b>19</b>										

Question number	Answer	Additional Guidance	Mark
3a	 <p>Award one mark for:</p> <ul style="list-style-type: none"> <li>• Staff name (StaffSurname or StaffFirstname or both) (1)</li> <li>• Owners counted (1)</li> <li>• Generated field named sensibly (1)</li> </ul>		3

3b



Award **one** mark for:

Bar/Column	Pie Chart
Chart created (1)	Chart created (1)
Meaningful chart title used (1)	Meaningful chart title used (1)
Axis shows staff names (1)	Legend is the staff names (1)
Axis shows full staff names (1)	Legend shows full staff names (1)
Axis contains suitable scale <b>Or</b> Data values are shown (1)	Data values are shown (1)
Fit for purpose: <ul style="list-style-type: none"> <li>No legend</li> <li>Appropriate sizing of elements on page (e.g. title larger than axis labels, data labels) (1)</li> </ul>	Fit for purpose: <p>Appropriate sizing of elements on page (e.g. title larger than legend labels, data labels) (1)</p>

6

Total for question 9

Question number	Answer	Additional Guidance	Mark
4	Award <b>one</b> mark for: <ul style="list-style-type: none"><li>• Test for a normal value (2 or 3 or 4) (1)</li><li>• Test for a boundary (1 or 5) (1)</li><li>• Test for extreme (0 or 6) (1)</li><li>• Type of test matches value in all cases (1)</li><li>• Expected results match value in all cases (1)</li><li>• 1 and 5 tested as boundary, 0 and 6 as extreme (1)</li></ul>		<b>6</b>
<b>Total for question</b>			<b>6</b>

Question number	Answer	Additional Guidance	Mark
5	<p><b>Indicative content</b></p> <p><i>Analysis</i></p> <ul style="list-style-type: none"> <li>• staff table has primary key of StaffID. This means the StaffID is unique and can only appear in the table once.</li> <li>• staff can take more than one holiday in a year so StaffID would repeat</li> <li>• staffID would not be suitable as a primary key.</li> <li>• even if another ID were introduced there would still be repeating groups of attributes i.e. StaffSurname, StaffFirstname, StaffTelephone, StaffStatus, ContractedHours.</li> </ul> <p><i>Recommendations</i></p> <ul style="list-style-type: none"> <li>• holiday table could be created</li> <li>• suitable unique primary key</li> <li>• suitable foreign key to maintain link to staff table</li> <li>• AnnualDays could stay in the staff table or be removed altogether as it is always 20</li> <li>• NumHoursToCover would not need to be stored as information is in staff table but named ContractedHours</li> <li>• HolidayStartDate, HolidayEndDate, Comments and CoverArranged would move to the holiday table</li> <li>• NumDays, and NumHolsLeft would not need to be stored as they can be calculated from the AnnualDays and the holiday dates</li> <li>• new field could be added called HolidayAgreed, which would be a Boolean field to show when holidays have been approved</li> <li>• form could be used for holidays. Input start and end dates then query to check no other members of staff are on holiday</li> <li>• query could be used to see whether cover has been arranged. Parameters could be used to find the staff member and holiday dates only for the holidays that have been agreed</li> <li>• calculations could be used to show Mobin how many days holiday have been taken and remain. These could be on a form, in a query or on a report. Holiday start and end dates would be used to determine how many holidays have been taken and these would be subtracted from the annual days to determine how many are left.</li> </ul>		<b>9</b>

Level	Mark	Descriptor
	0	No Awardable content
Level 1	1-3	<ul style="list-style-type: none"> <li>• Analysis is flawed or superficial, containing simple statements that show limited understanding of the subject matter.</li> <li>• Solution may contain some aspects that are appropriate, but is generally ineffective.</li> </ul>
Level 2	4-6	<ul style="list-style-type: none"> <li>• Analysis is sound, containing minor inaccuracies or omissions, showing some understanding of the given issue.</li> <li>• Solution is workable but may have minor issues.</li> </ul>
Level 3	7-9	<ul style="list-style-type: none"> <li>• Analysis is sound and developed, containing ideas that are linked together in a fluent and logical way, showing a thorough understanding of the given issue.</li> <li>• Solution is appropriate and workable.</li> </ul>
<b>Total for question</b>		<b>9</b>

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Ofqual  