Name: _____

IAL IT Topic 5 Examiner's Report

Date:

Time:

Total marks available:

Total marks achieved: _____

Mark Scheme

Q1.

Question number	Answer	Additional guidance	Mark
	Award **one** mark for each correct part of the query up to a maximum of **six** marks. 1. select required fields from the correct tables (1) 2. only the required fields selected (1) 3. officialName = Mimosa / officialName LIKE Mimosa (1) 4. use of wildcard appropriately (Mimosa%) (1) 5. use of AND for a multiple condition (1) 6. join correct (1) 7. ORDER BY supplierName (1) e.g. SELECT officialName, supplierName, telephone FROM tbl_supplier, tbl_plant WHERE officialName = 'Mimosa%' AND flowerColour = 'White' AND height >= 2 AND tbl_supplier.supplierID = tbl_plant.supplierID ORDER BY supplierName e.g. SELECT tbl_plant.officialName, tbl_supplier.supplierName, tbl_supplier.telephone FROM tbl_plant, tbl_supplier INNER JOIN tbl_supplier ON tbl_plant.supplierID = tbl_supplier.supplierID WHERE officialName = 'Mimosa%' AND flowerColour = 'White' AND height >= 2 (AND tbl_supplier.supplierID = tbl_plant.supplierID) ORDER BY supplierName	Award marks with errors in syntax as long as the intent is clear.	6

Q2.

Question number	Answer	Additional Guidance	Mark
	Award **one** mark for each point up to a maximum of **three** marks. • specifically designed for data manipulation (1) • proven reliability/extensively tested / been around for long time/for 50 years (1) • large body of knowledge/large community of users/lots of examples available (1) • simple to get started/learn the basics (1) • has a powerful instruction set for more advanced users/data manipulation (1) • stated example of instruction set (1) e.g. select – from – where / ordering by / use of wildcard	Only allow **one** example for point 6	**3**

Q3.

Question number	Answer	Mark
(i)	Award **one** mark for a difference identified and **one** mark for justification/expansion up to a maximum of **two** marks. • Data comes in many forms such as numbers, texts, and dates (1) whereas information is a higher level of abstraction than data (1) • In itself, data has no meaning (1), whereas information implies giving meaning to data (1)	**2**

Question number	Answer	Mark
(ii)	Award **one** mark for each correctly identified example up to maximum of **two** marks. **Data** Any individual data item without the field name/context (1) e.g. 'Jones', '93210'. **Information** Any individual item of information (1) e.g. the customer's last name is Jones, the customer's ID is 93210.	**2**

Q4.

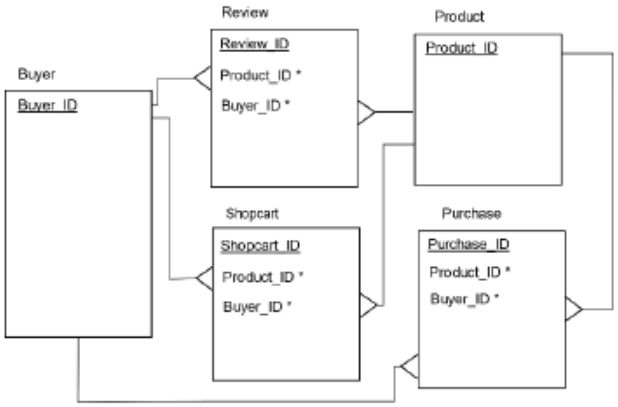
Question number	Answer	Additional Guidance	Mark
i	Award **one** mark for each correct part of the query up to a maximum of **six** marks. • select required fields from the correct tables (1) • only the required fields selected (1) • manufacturer = Lucas Electrical (1) • stock > 0 (1) • use of LIKE/= with correct pattern for part number (1) • use of AND for multiple conditions (1) • join correct (1) • ORDER BY name (1) e.g. SELECT name, telephone FROM tbl_supplier, tbl_bulbs WHERE manufacturer='Lucas Electrical' AND partnumber LIKE 'LL_ _80 1157 BAY_ _D' / =LL%80 1157 BAY%D AND stocklevel > 0 / !=0 / <>0 AND tbl_supplier.supplierID=tbl_bulb.supplierID ORDER BY name	Award marks with minor errors in syntax as long as the intent is clear.	6

Question number	Answer	Additional Guidance	Mark
ii	Award up to a maximum of **three** marks for a linked explanation. e.g. Car dealer has access to rare / obsolete stock (information) (1) does not have to build / maintain its own database / information is all in one place/does not have to call numerous suppliers (1) saving time / resources (1) Car dealer has access to rare / obsolete stock (information) (1) does not have hold wide variety of stock (1) saving space / resources / money (1) Car dealer can offer (better) service to customers (1) that it could not do without access (1) giving better customer experience / satisfaction (1) Car dealer can supply rare / obsolete items (1) that would take time / resources to find without the database (1) giving increased sales / profit / customer satisfaction (1)		3

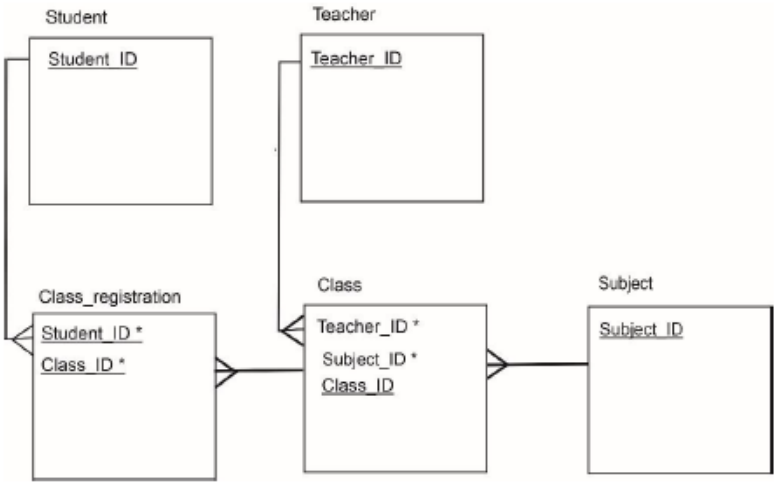
Q5.

Question number	Answer	Additional guidance	Mark
	Award **one** mark for each correct part of the query up to a maximum of **six** marks. • Selecting required fields from the correct tables (1) • Counting the number of occurrences (1) • Identify the matching fields in both tables (inner join) (1) • Grouping by housekeeper (1) • Descending order by count (1) • Use of the month function on the date field (1) Indicative content select firstname, lastname, count(*) from tbl_cleanedby, tbl_housekeepers where month(date)=12 and idhousekeepers=housekeeper group by housekeeper order by count(*) desc; select firstname, lastname, count(*) as numrooms from tbl_cleanedby inner join tbl_housekeepers on idhousekeepers=housekeeper where month(date)=12 group by housekeeper order by numrooms desc; select firstname, lastname, count(*) as numrooms from tbl_cleanedby, tbl_housekeepers where month(date)=12 and idhousekeepers=housekeeper group by housekeeper order by numrooms desc;	Award marks with minor errors in syntax as long as the intent is clear.	**6**

Q6.

Question number	Answer	Additional Guidance	Mark
	Award **one** mark for: • all **five** correct relationships (the lines) (1) • any **three** correct relationship **types** (1) • remaining **two** correct relationship **types** (1) • all **four** correct primary keys (1) • any **two** correctly identified foreign keys out of Review, Shopcart, and Purchase (1) • **third** correctly identified foreign key (1) 		**6**

Q7.

Question number	Answer	Additional Guidance	Mark
	Award **one** mark for each of: • at least three correct relationships (the lines) • at least three correct relationship types • at least three correct primary keys in Student, Teacher, Subject, Class • correct composite primary key in Registration • correctly identified foreign keys in Class • correctly identified foreign keys in Registration 		**6**

Q8.

Question number	Answer	Additional guidance	Mark
i	Award one mark for: • Supplier ID (1) • Product ID (1)		1
ii	Award one mark for: • Supplier ID (1)		1
iii	Award one mark for: • Float (1) • Double (1) • Decimal/Dec (1) • Real (1)	Not integer or numeric	1
iv	Award one mark for: • Text (1) • String (1) • Varchar (1)		1

Q9.

Question number	Indicative content.	Mark
	Structured data: • quantitative • fits in fixed fields • easy to organise • can manipulated/understood/searched by machine language/SQL Structured data examples: • plant ◦ names ◦ typical size ◦ country of origin ◦ preferred soil type • customer ◦ credit card number ◦ account number ◦ address details ◦ telephone number Unstructured data: • qualitative • does not fit easily into fixed fields • needs language processing/text mining techniques • usually takes more storage space than structured data Unstructured data examples: • plant ◦ photo/video of plant e.g. showing it flowering ◦ notes on e.g. plant health • customer ◦ email ◦ record of telephone enquiries/other communications ◦ photo of plant e.g. showing a disease	6

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	• Demonstrates limited knowledge and understanding, some of which may be inaccurate. • Applies understanding with limited coherence to produce a response that lacks development.
Level 2	3–4	• Demonstrates knowledge and understanding, which is mostly relevant and may include some inaccuracies. • Applies understanding to make some coherent connections and a partially developed response.
Level 3	5–6	• Demonstrates accurate and relevant knowledge and understanding throughout. • Applies understanding coherently to produce a fully developed response.

Q10.

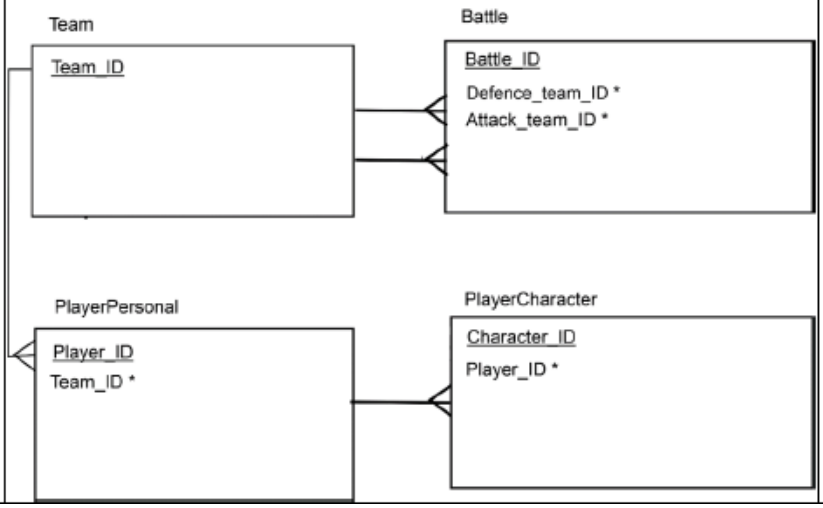
Question number	Answer	Additional Guidance	Mark
i	Award **one** mark for one of: • data is a raw/unorganised/unprocessed fact/number/words/statement/etc. (1) • a fact without a context (1) • in itself, data has no meaning (1)		1
ii	Award **one** mark for one of: • information is data that has been processed to make it useful (1) • data that has been given a context (1)		1

Q11.

Question number	Indicative content	Additional Guidance	Mark
	Responses should be in relationship to the context of the question. (Discuss why a relational database is suitable for handling structured data.) Structured data • is readable by machine • using simple algorithms Databases in general • long established (over 40 years) method of holding data • so well understood / tested / unlikely to produce unexpected errors Type of database / using RDBMS • reduces data duplication / enforces integrity • stores data in tables / records / fields • allows linking of tables through keys • tables / records / fields are machine readable with simple algorithms Database queries • database designed for efficient queries / machine readable with simple algorithms • many programming languages have built-in functions/libraries to deal with database structures • SQL is simple, widespread, and popular / easy for non-technical users to learn/use		6

Level	Mark	Descriptor
	0	No rewardable material.
Level 1	1–2	• Demonstrates limited knowledge and understanding, some of which may be inaccurate. • Applies understanding with limited coherence to produce a superficial and unbalanced discussion.
Level 2	3–4	• Demonstrates knowledge and understanding which is mostly relevant but may include some inaccuracies. • Applies understanding to make some coherent connections, leading to a discussion that shows some development, but may be unbalanced.
Level 3	5–6	• Demonstrates accurate and relevant knowledge and understanding throughout. • Applies understanding coherently to produce a balanced and fully developed discussion.

Q12.

Question number	Answer	Additional Guidance	Mark
	Award **one** mark for each of: • one correct relationship • one correct relationship type • three correct primary keys • correctly identified foreign keys in PlayerPersonal and PlayerCharacter • Attack_team_ID in Battle • a complete diagram with no extra attributes or relationships or incorrect keys 		6

Q13.

Question number	Answer	Additional Guidance	Mark
	The only correct answer is D *A is not correct because Purchase.Quantity must be entered by the purchaser/ taken from the shopping cart entry.* *B is not correct because Shopcart.Quantity must be taken from the shopping cart entry.* *C is not correct because Purchase.Delivery_stage will need parcel tracking information from a third party/another system.*		**1**