MODULE N DATABASES AND SQL · N4

SQL: SELECT, FROM and WHERE: mark scheme

20 marks · Cambridge 0478 syllabus 9.4 (read, understand and complete SQL scripts to query data stored in a single database table: SELECT, FROM, WHERE; identifying the output given by an SQL statement). ORDER BY, SUM, COUNT, AND and OR are covered in N5.

How to use. One mark per creditworthy point up to the maximum shown. **/** separates alternative words; **//** separates alternative answers. Words in (brackets) are not needed for the mark. Ignore capitals in SQL keywords and minor slips in spacing; a statement may be written on one line. Field and table names must be spelt exactly as in the table TREES, with no added spaces. Text and character values may be in single or double quotes (`'B'` // `"B"`); numbers must not be in quotes. Ignore a missing final semicolon. In output answers, copy the values exactly, in the column order given in the SELECT line; ignore field headings and the order of the rows. Credit any other valid answer that shows the same understanding.

QUESTION	ANSWER	MARKS	GUIDANCE
1 0478 9.4	One mark for each: • (line 1) displays only the `Variety` and `Section` fields // shows only the variety and section of each tree • (line 2) takes the data from / searches the table `TREES` • (line 3) only includes the records / trees where `Planted` is greater than 2018 // trees planted after 2018 Credit any other valid answer.	**3**	Line 1: do not accept "selects the records" or "selects the trees" (records are chosen by WHERE). Line 3: do not accept "planted in or after 2018" // `>= 2018`. (Output, not required: Pear B, Apple B, Plum B; checked in sqlite3.)
2(a) 0478 9.4	One mark for each correct row: • `T01 Apple` • `T03 Plum` • `T06 Pear`	**3**	Trees taller than 4.0 m: 4.2, 5.1 and 4.8. Each row needs the TreeID **and** the variety, in that order. Any extra row (e.g. `T05 Cherry`) or extra field (e.g. the height): max 2.
2(b) 0478 9.4	3 // three	**1**	T03, T06 and T08 are in section C. Do not accept 15 (number of values) or 5 (number of fields).
3 0478 9.4	One mark for each correct line: • `SELECT TreeID, Planted` • `FROM TREES` • `WHERE Section = 'B';`	**3**	First line: both fields, separated by a comma, in either order; do not accept `SELECT *` or extra fields (the question says "only"), or `AND` between the fields. Third line: `B` must be in quotes.

QUESTION	ANSWER	MARKS	GUIDANCE
4 0478 9.4	One mark for each correct line: • `SELECT Variety, HeightM` • `FROM TREES` • `WHERE Planted < 2016;`	**3**	Fields in either order. Accept `WHERE Planted <= 2015` (years are whole numbers) and `WHERE 2016 > Planted`. Do not accept `<= 2016`, `'2016'` in quotes, or words in place of <. Lines in the wrong order (e.g. WHERE before FROM): max 2. (Output, not required: Apple 4.2, Plum 5.1, Pear 4.8.)
5(a) 0478 9.4	One mark for each error identified **and** corrected: • Line 01: `SELECT TreeID, HeightM` • Line 02: `FROM TREES` • Line 03: `WHERE Variety = 'Plum';`	**3**	The line number alone, or a correction without its line number: 0 for that error. Line 01: a comma is needed between the fields; do not accept `AND` or `SELECT *`. Line 02: the table name is `TREES`. Line 03: `Plum` in single or double quotes.
5(b) 0478 9.4	One mark for each correct row: • `T03 5.1` • `T07 2.4`	**2**	Each row needs the TreeID and the height, in that order. Any extra row or extra field (e.g. `Plum`): max 1.

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	One mark for each:
	• `SELECT * … FROM TREES`
	• `WHERE TreeID = 'T05';`
	Example:
	`SELECT *`
	`FROM TREES`
	`WHERE TreeID = 'T05';`
		2	Accept all five fields listed, separated by commas, in place of *. `T05` must be in quotes. Do not accept `SELECT ALL` or `SELECT TreeID` alone for the first mark.

Total: 20 marks