MODULE N DATABASES AND SQL · N3

Primary keys: mark scheme

20 marks · Cambridge 0478 syllabus (exams 2026-2028) 9.3 (understand the purpose of a primary key and identify a suitable primary key for a given database table), with 9.1 (define a single-table database from given data storage requirements)

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. Credit any other valid answer that shows the same understanding. Field names do not need exact capitals or spacing, but must clearly name the field.

QUESTION	ANSWER	MARKS	GUIDANCE
1(a) 0478 9.3	One mark for each correct row: A primary key uniquely identifies each record: True Two records can have the same primary key value if other fields differ: False A primary key field can only store whole numbers: False If no existing field is unique, a new field can be added to be the primary key: True	**4**	A row with both boxes ticked scores 0.
2(a) 0478 9.3	Any two from: A primary key must have a different / unique value for every record Every field (in the table) has at least one repeated value // no field has a unique value for every record A correct example from the table, e.g. two paintings are called Untitled // E. Marsh / R. Tanaka appears twice // 1968 appears twice // Oil / Acrylic appears twice // Room 3 / 5 appears twice New paintings could repeat any of these values (e.g. another painting by the same artist)	**2**	max 2. Credit an example only if the value really is repeated in the table. Only one example can be credited.
2(b) 0478 9.3	One mark for each: Field name: a suitable identifier name, e.g. PaintingID // PaintingNumber // CatalogueNumber // PaintingCode Example value: a value that could be a unique code / number for one painting, e.g. P001 // 1 // HD0001	**2**	Do not credit the name of an existing field (e.g. Title, Artist) or a name that does not suggest an identifier (e.g. Painting). Do not credit as the example value the painting's existing descriptive data (e.g. Harbour at Dawn, E. Marsh, Oil). Credit any number or code that could identify this one painting (e.g. 1, 3, P001). The example mark can be awarded even if the field name is not credited.

QUESTION	ANSWER	MARKS	GUIDANCE
3(a) 0478 9.3	RunnerNumber	**1**	Do not credit FinishTime (see 3(d)) or any other field. Do not credit a value (e.g. 1032) instead of the field name.
3(b) 0478 9.3	Any two from: To uniquely identify each record // each runner Each record / runner has a different value // no two records can have the same value ... so that one record / one runner's details can be found / selected // the correct record can be updated (e.g. when entering one runner's finish time) without confusing it with another	**2**	max 2. "Identifies a record" without the idea of unique / only one record = no mark for MP1. Do not credit "it is the first field" or "it sorts the table".
3(c) 0478 9.3	Any two from: Surname values are not unique // can be repeated // two runners can have the same surname Use of data: two runners / records have the surname Hughes // Daniel Hughes and Tom Hughes // records 1047 and 1103 ... so a surname would not identify one record // a search on Hughes would return more than one record	**2**	max 2. MP2 must quote the repeated surname (Hughes) from the table. Do not credit "names can be spelt wrongly" or "names are too long" alone.
3(d) 0478 9.3	Any two from: Two runners could finish with the same time // finish times could repeat when more records are added A primary key must be unique for every record (that will ever be stored), not only the records shown ... so a finish time might not identify one record / runner A runner has no finish time until they finish // until the race is over, so the record would have no key value	**2**	max 2. Do not credit "it is a time" or "it is not a number" alone: a primary key does not have to be a number.
3(e) 0478 9.3	Any two from: 1058 is already used // already belongs to (the record for) Priya Shah Primary key values must be unique // there cannot be a duplicate primary key value ... two records would have the same key, so 1058 would not identify one runner // a search / update using 1058 could find / change the wrong runner	**2**	max 2. Do not credit "the number is wrong" or "it is invalid" alone.
4(a) 0478 9.3, 9.1	PermitNumber	**1**	Do not credit VehicleReg (see 4(b)) or any other field.

QUESTION	ANSWER	MARKS	GUIDANCE
4(b) 0478 9.3, 9.1	Any two from: Each record is a permit, not a vehicle // a vehicle can have more than one permit (when the permit is renewed) Old permit records are kept, so the same vehicle can have more than one record (in the table) ... so the same VehicleReg value would appear in more than one record // VehicleReg values would not be unique (for each record) ... so VehicleReg would not identify one permit / record	**2**	max 2. Do not credit "registrations can change" or "registrations contain letters" alone. MP3 and MP4 can be credited without MP1 or MP2.

Total: 20 marks