MODULE N DATABASES AND SQL · N2

Database data types and validation

Original practice questions · 22 marks · ~25 minutes · Cambridge 0478 syllabus 9.1, 9.2 (with 7.5(a))

Name _____ Date _____

Instructions. Answer all questions in the spaces provided. The marks for each part are shown in brackets [ ]. The total for this worksheet is **22 marks**. Use these database data types in your answers: text/alphanumeric, character, Boolean, integer, real, date/time.

A plant nursery keeps details of the plants it sells in a single-table database called **PLANT**. Part of the table is shown.

PlantID	CommonName	PotSize	Price	Stock	Evergreen	DateArrived
EV0193	Holly	M	12.50	120	Yes	03/11/2026
HY0088	Hydrangea	L	24.00	45	No	28/10/2026
LV0207	Lavender	S	4.99	310	Yes	06/11/2026

PotSize is always one letter: S, M or L. Price is in dollars. Stock is the number of pots the nursery has. Evergreen can only be Yes or No.

1 **Total: 5 marks**

Tick (✓) **one** box in each row to show the most appropriate data type for each field in the table PLANT. **[5]**

Field	Text/ alphanumeric	Character	Boolean	Integer	Real	Date/time
PotSize						
Price						
Stock						
Evergreen						
DateArrived						

2 **Total: 2 marks**

The nursery adds a field, SupplierPhone, to store the phone number of each plant's supplier, for example 01632 960482

State the most appropriate data type for the field SupplierPhone and give a reason for your choice. **[2]**

Data type

Reason

3 **Total: 7 marks**

Validation checks are set up on the fields in the table PLANT.

(a) State the purpose of a validation check. **[1]**

(b) The table shows six rules. Complete the table by writing the name of the most appropriate validation check for each rule. **[6]**
Use each of these checks **once**: check digit, format check, length check, presence check, range check, type check.

Field	Rule	Validation check
Stock	The value must be from 0 to 500 inclusive.	
DateArrived	The field must not be left empty.	
PlantID	The value must be two capital letters followed by four digits, for example EV0193	
CommonName	The value must have no more than 30 characters.	
Price	Only a number can be entered; letters are rejected.	
Barcode (a new field)	The last digit of the barcode number is worked out from the other digits.	

4 **Total: 2 marks**

Each plant label has a barcode number. The last digit of the number is a check digit.

Describe how the check digit is used to validate a barcode number when it is entered. **[2]**

5 **Total: 6 marks**

The nursery runs gardening workshops for adults. It is setting up a second single-table database called **WORKSHOP** to store the bookings. These are some of the data storage requirements:

- **BookingRef**: a unique reference made of the letter B followed by three digits, for example B207
- **Seats**: the number of seats booked; a booking is for at least 1 seat and at most 12 seats
- **WorkshopDate**: the date of the workshop

Complete the table. For each field, give the most appropriate data type and identify a suitable validation check. Describe what the check would test for that field. **[6]**

Field	Data type	Validation check and what it would test
BookingRef		
Seats		
WorkshopDate		

Total for this worksheet: 22 marks