

» Section A

1 mk for each question.

- | | | | |
|------|-------|-------|-------|
| 1. C | 6. D | 11. B | 16. D |
| 2. D | 7. A | 12. C | 17. B |
| 3. B | 8. A | 13. C | 18. C |
| 4. C | 9. D | 14. C | 19. B |
| 5. A | 10. D | 15. D | 20. D |

» Section B

Question 21

Part (a)

1 mk: data is highly structured; i.e. large number of similar identities with identical fields

1 mk: enables the comparison of numerical data to obtain information (e.g. fastest run, longest run)

Part (b)

1 mk: correctly identifies flat-file database as most suitable

1 mk: only a single kind of entity is being described, so all data can fit in a single table

1 mk: flat-file databases are generally smaller in size, which is important for mobile devices with limited storage capacity

Part (c)

1 mk: for each correctly described field (maximum 4); ½ mk deducted for inappropriate field name, data type or data size

| Field Name | Type | Size | Description |
|--------------|------------------------|---------|--|
| RunID | Text | 4 bytes | Primary key to distinguish each run |
| Date | Date/Time | 8 bytes | Date that exercise session takes place |
| Duration | Numerical: Fixed Pt | 2 bytes | Length of run in seconds |
| DistanceRun | Numerical: Fixed Pt | 2 bytes | How far run in metres |
| AverageSpeed | Numerical: Floating Pt | 4 bytes | Pace in kilometres per hour |

Part (d)

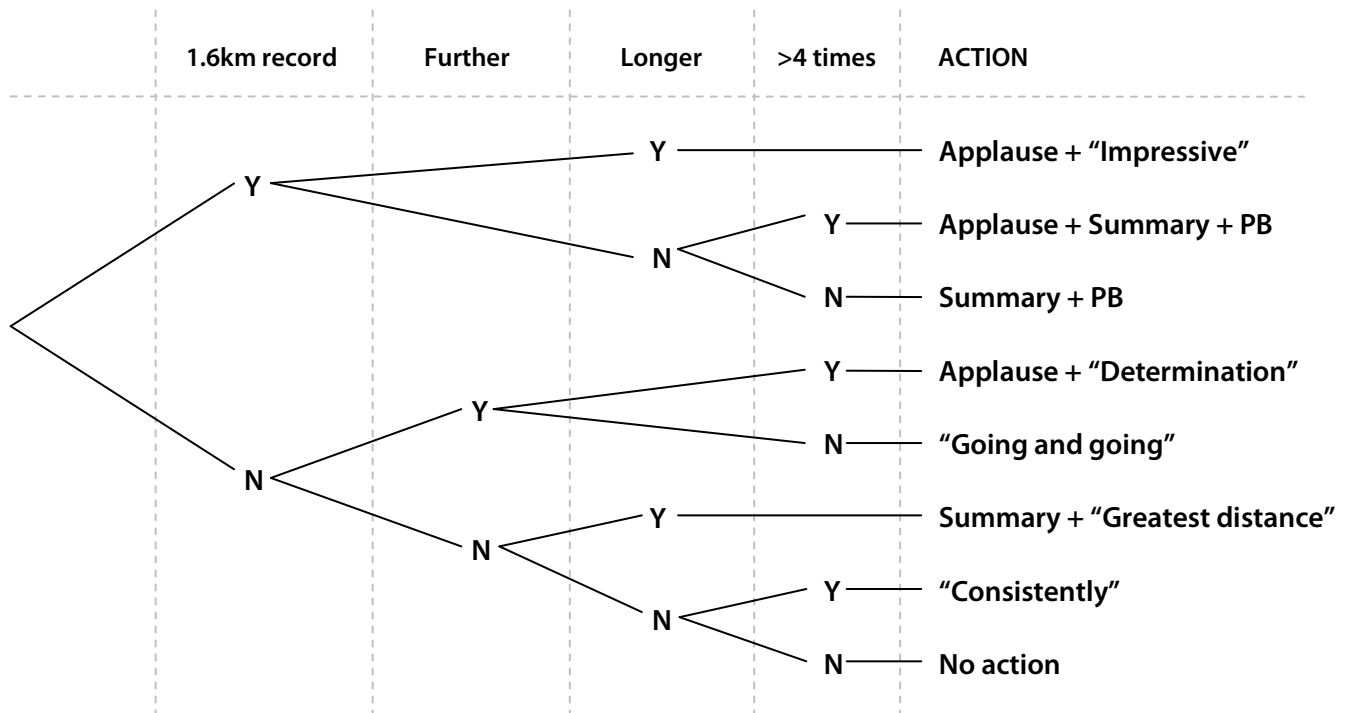
1 mk: two conditions must be satisfied simultaneously

Part (e)

1 mk: accurately setting out

1 mk: includes results

1 mk: appropriate branches (i.e. complete, does not include irrelevant branches)



Question 22

Part (a)

1 mk: identify closed rectangle as entity and open rectangle as data store

½ mk: compare similar features with examples (e.g. both supply customer details)

½ mk: contrast distinct features with examples (e.g. one is a group of people; the other is a paper file)

Part (b)

1 mk: general customer details (e.g. name, address, contact details, preferred time)

1 mk: general job details (date received, time scheduled, customer's name, cleaner allocated)

½ mk: "priority" as part of the customer details

½ mk: "recurring?" as part of the job details

Part (c)

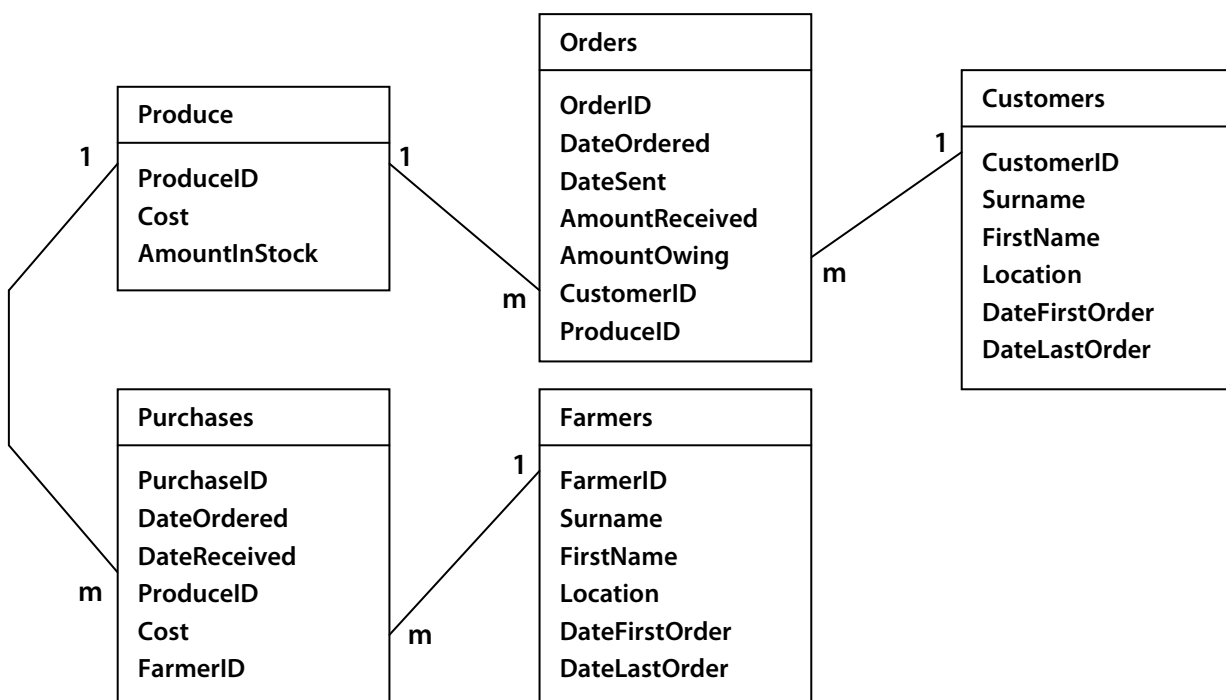
2 mks: proposes suitable techniques for identifying problems (e.g. customer satisfaction surveys; face-to-face interviews with cleaners)

2 mks: details of techniques relate to the replacement of a manual system with a computerised system (i.e. poses specific questions about the effectiveness of the information system, such as “are the written forms easy to fill out?”, “are the filled out forms legible?”, “are the daily job sheets easily lost?”, “is the data store of past jobs difficult to sort through due to its size?”)

Question 23

Part (a)

½ mk: for each correctly identified relationship



Part (b)

1 mk: the Cost field in the Produce table is the price at which the shop sells items; the Cost field in the Purchases table is the price paid by the shop to the Farmers

1 mk: having both fields enables the calculation of profits

Part (c)

1 mk: despite having similar names, these fields refer to very different values; for ‘orders’ from Farmers represent outgoing funds but ‘orders’ from Customers represents incoming payments

Part (d)

- 1 mk: add new fields to Produce: Freshness, Bruised, Rotten, Colour and Size (agreed upon parameters that describe the quality of produce)
- 1 mk: add new calculation field, "Quality", that takes fields above and produces a numerical value based on an algorithm that takes the relative importance of each parameter
- 1 mk: add new field to Produce: "Orders" that indicates relative performance of sales and is related to Quality field