

R001: Understanding Computer Systems – Mock Exam³

Candidates answer on the question paper.

Supplied Materials:

- Clean copy of the case study

Other Materials Required:

- None

May 2017
Duration: 1 hour

Candidate Forename:		Candidate Surname:	
----------------------------	--	---------------------------	--

INSTRUCTIONS TO CANDIDATES

- Write your name clearly in capital letters above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Write your answer to each question in the space provided, however additional paper may be used if necessary.

INFORMATION FOR CANDIDATES

- The number of marks for each question is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- The document consists of **9** pages. Any blank pages are included.

Information for Learners

Car sales showrooms sell new and previously owned cars. (Scenario 1). Breakdown recovery services operate fleets of specially engineered vehicles that are able to transport broken down cars and other vehicles from the site of a breakdown to a repair garage or other location. (Scenario 2)

Scenario 1

Indiana Motors is an established business with a car sales showroom that sells between 150 and 300 new and previously owned cars a year. Indiana Motors keeps detailed records of each car it stocks and sells. It also keeps records of the details about each of its customers when they buy a car.

When a customer requests a test drive of a car they are interested in buying, the details of the booking are entered onto an online calendar. This calendar is shared with the sales team who are then responsible for ensuring that a sales person is available to accompany the customer on the test drive.

As part of its marketing, Indiana Motors has a multimedia presentation that plays in a loop in the showroom. The multimedia presentation was created by the Sales Team at Indiana Motors and features many of the cars that are currently on sale in the showroom.

Scenario 2

Safe Breakdown is a breakdown recovery and vehicle repair service that is recommended by Indiana Motors. Safe Breakdown uses technology in all areas of the business and has recently introduced technology into the processes of vehicle tracking and parts tracking in its warehouse.

Safe Breakdown prides itself on how well it looks after its staff and operates a well-resourced headquarters building which includes a canteen and a staff shop. Each member of staff is provided with a payment card that they can use to pay for their purchases. The total cost of all purchases made by the employee is deducted from their wages at the end of each month.

Safe Breakdown handles a large quantity of personal data about clients on a daily basis and must be aware of legal restrictions on how it handles this data.

Dulcie works for Safe Breakdown as a vehicle recovery driver. To support her in her work, Dulcie is provided with a smartphone, which is used to pass on locations of breakdowns if she is out of the building. The Safe Breakdown Acceptable Use Policy states that Dulcie must keep her smartphone switched on and fully charged at all times and she makes sure that she keeps to this rule. Dulcie is also provided with a hands-free headphone set for use with the smartphone.

Scenario A

The questions in this section are based on the scenario in the case study and your background research.

Answer all questions.

1 Indiana Motors has a website that it uses to book test drives using an online calendar.

(a) Identify one input device that could be used to enter text onto the website.

..... [1]

John, a new customer, must set up an account by completing a form on the website before he can book a test drive. To do this, he will need to choose a username and enter the county where he lives.

(b) Explain why each username used on the Portland Games website must be unique.

.....
.....
.....
..... [2]

(c) Explain how the form could make sure that John can enter only a valid county name.

.....
.....
.....
..... [2]

2 The information that John gives when he creates his new account is stored on a database.

(a) State one output device which can be used to produce a hard copy of the information stored in the database.

.....
..... [1]

(b) Describe three features of database software that make it suitable for storing and analysing customer information.

1

.....

.....

.....

2

.....

.....

.....

3

.....

.....

.....

[6]

3 Data, including the name, address and phone number of each customer who buys a car will be stored on a database. They will be sent a letter with their warranty details

(a) Identify the procedure that will be used to add the names stored on the database to the letter

..... [1]

(b) Describe one benefit of being able to contact the customer using this method.

.....

.....

.....

..... [2]

(c) Identify a suitable period of time after which Austin School should delete the data for each customer from its records. Explain why this is a suitable period of time.

Period of Time:

Explanation:

.....

.....

..... [2]

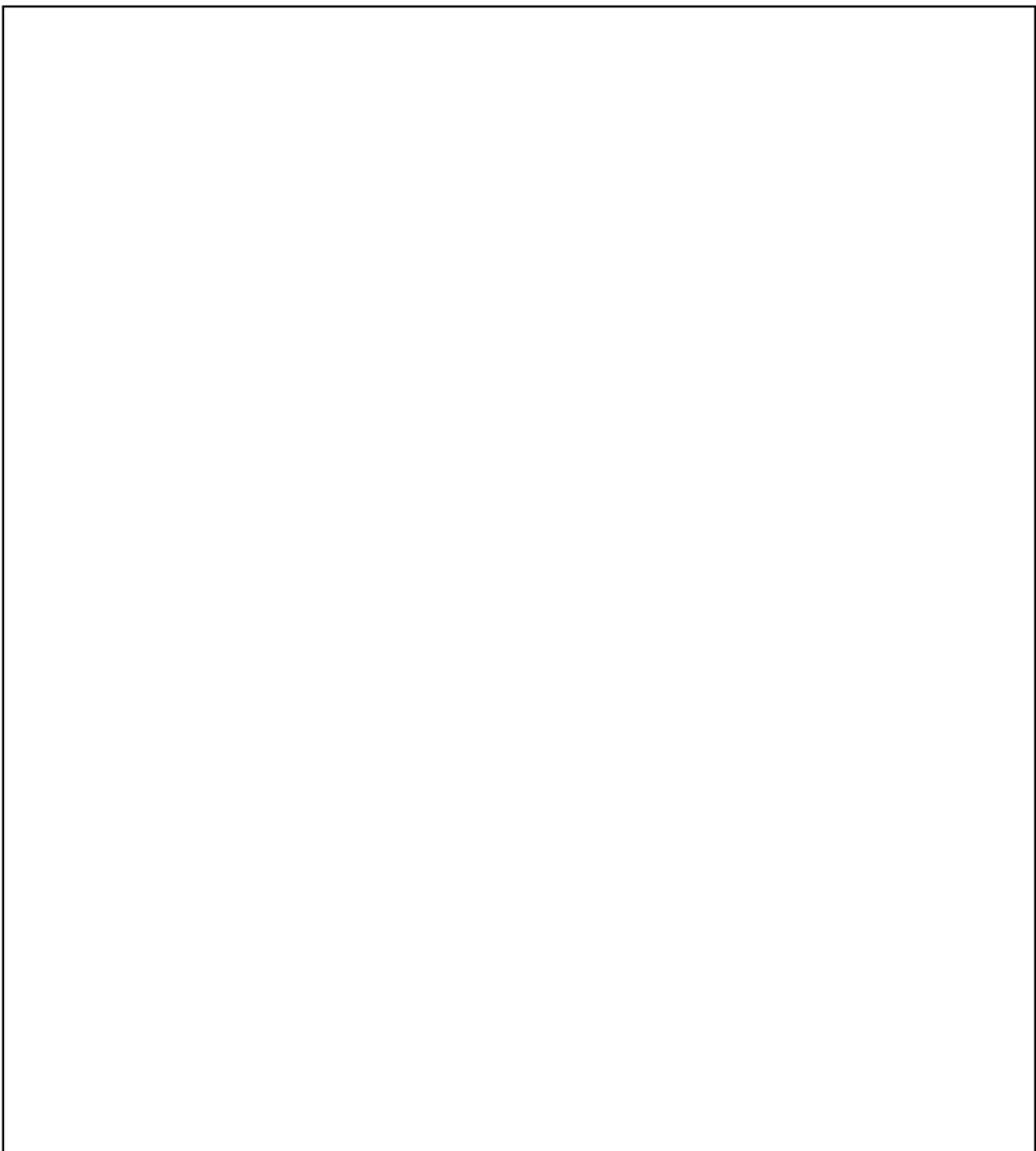
4 Indiana Motors needs an online data capture form on its website that applicants for test drives can complete and submit electronically.

In the space below design a suitable online data capture form.

Marks will be awarded for:

- items to be included
- good use of space
- fitness for purpose
- annotations to justify decisions.

[7]

A large empty rectangular box with a thin black border, intended for the student to draw their design for an online data capture form. The box is currently blank.

5 Indiana Motors regularly archives data that is held on its computer system.

(a) State one reason why Cable Ties Ltd archives data.

.....
..... [1]

(b) Identify one possible problem to Indiana Motors that may be caused by archiving data.

.....
..... [1]

(c) All archived data needs to be held on a storage medium.

(i) Identify one medium that would be suitable for Indiana Motors to archive data.

.....
..... [1]

(ii) Explain why this medium would be suitable for this purpose.

.....
.....
.....
..... [2]

Scenario B

6 Safe Breakdown uses smart cards to track the purchases for staff.

Describe how a smartcard reader captures the data stored in the card.

.....
.....
.....
.....
.....
..... [3]

7 (a) Safe Breakdown receives information from Dulcie’s smartphone to track her location.

Describe how the Global Positioning System (GPS) locates the position of an individual phone.

.....
.....
.....
.....
..... [3]

(b) Dulcie is sent the location of breakdown using her smartphone. Other than a phone call explain 2 different methods that could be used to send her this information.

.....
.....
.....
..... [2]

(c) Explain one drawback and two benefits of using a phone call to give Dulcie this information.

.....
.....
.....
..... [3]

10 Dulcie is given a smartphone that she can use to communicate with customers and, the Office.

(a) Identify two input methods that Dulcie can use to enter information onto a smartphone.

- 1
-
- 2
- [2]

(b) Identify two output devices that may be found on smartphones.

- 1
-
- 2
- [2]

(c) Dulcie can use their smartphones to make phone calls, send text messages and receive their breakdown information.

Describe two other ways Dulcie could use her smartphone to help her with her work.

- 1
-
-
-
-
- 2
-
-
- [2]

11 Safe Breakdown requires Dulcie to sign an Acceptable Use Policy (AUP) before being issued with her smartphone. The AUP states that Dulcie must keep the smartphone on and fully charged. Explain two reasons why Safe Breakdown would need to phones on and fully charged at all times.

- 1
-
-
-
- 2
-
-
- [4]