



COMPUTER SCIENCE

GENERAL COURSE

Marking key for the Externally set task
Sample 2016

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Computer Science

Externally set task – marking key

- 1(a) List and describe **two (2)** types of system development methodologies that could be used to create a bookings database system for Carl's Cosy Cottages.

Description	Marks
Methodology 1:	
Correctly lists and provides detailed description of prototyping	3
Correctly lists and briefly describes prototyping	2
Lists prototyping	1
Methodology 2:	
Correctly lists and provides detailed description of Systems Development Life Cycle (SDLC)	3
Correctly lists and briefly describes the SDLC	2
Lists SDLC	1
Total	6
Answer could include, but is not limited to:	
<ul style="list-style-type: none"> • types of system development techniques • prototyping • systems development life cycle approach (SDLC) • key concepts of prototyping • prototyping offers a relatively fast development time • prototyping is relatively cheap compared to SDLC • prototyping makes use of continuous user feedback • key concepts of the SDLC • framework defining tasks for the software development • plan is detailed and provides a methodology • costly and expensive 	

- (b) Describe **one (1)** advantage and **one (1)** disadvantage of one of the system development techniques you identified in Question 1(a).

Description	Marks
Provides a detailed description of one advantage and one disadvantage of prototyping	2
Provides a brief description of one advantage and one disadvantage of prototyping	1
Provides a detailed description of one advantage and one disadvantage of the SDLC	2
Provides a brief description of one advantage and one disadvantage of the SDLC	1
Total	4
Answer could include, but is not limited to:	
Advantages of prototyping <ul style="list-style-type: none"> • reduced time and costs • increased client involvement in system development Disadvantages of prototyping <ul style="list-style-type: none"> • potential for minimal system analysis • difficult to determine system completion • potential for developer to misunderstand system requirements • potential for long development time and increased costs of production Advantages of the SDLC <ul style="list-style-type: none"> • each stage requires a review before moving to next stage to ensure quality control • requires detailed systems documentation to ensure all developers have a consistent development instruction • system documentation enables transparency of system development and accountability • staged products can be reviewed and tested to determine if system meets specification Disadvantages of the SDLC <ul style="list-style-type: none"> • client does not see final product until end of process • difficult for client to review product during development • potential for clients' changing needs to be misrepresented or not addressed • development is expensive and time consuming 	

2. Describe the **five (5)** main components required for a computer system that would be suitable to operate the bookings database for a small business such as Carl's Cosy Cottages.

Description	Marks
Provides a suitable description for each device suitable for the for this purpose (input, output, processing, communication and storage)	2 (2 each)
Lists one input, one output, one processing and one storage device (input, output, processing, communication and storage)	1 (1 each)
Total	10
Accept other correct responses	

- 3(a) Provide **two (2)** reasons why an ICT Code of Conduct is necessary for the Carl's Cosy Cottages staff to follow for tasks, such as using the computer system to make a booking for a guest.

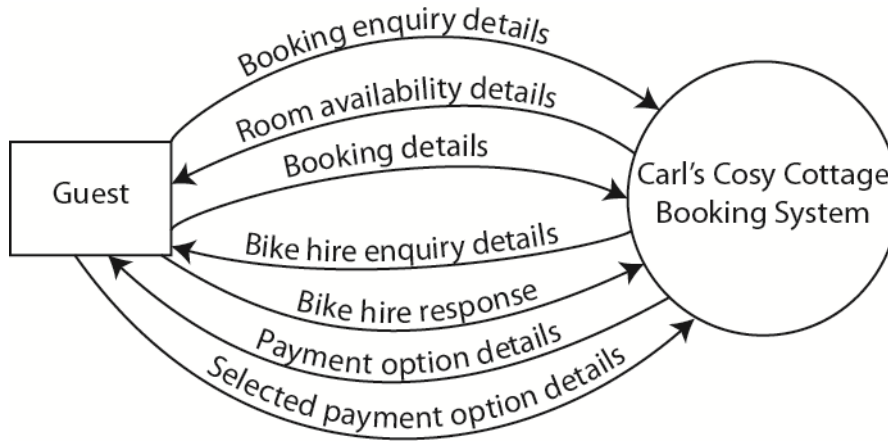
Description	Marks
Provides a detailed explanation of at least two reasons why a code of conduct is necessary	5–6
Provides an explanation of at least two reasons why a code of conduct is necessary	3–4
Provides a brief explanation of at least two reasons of why a code of conduct is necessary	1
Total	6
Answer could include, but is not limited to:	
Reasons for a code of conduct <ul style="list-style-type: none"> • provides a guide and reference for appropriate use • reflects company values • ensures staff conformity to legislation (privacy of data) • ensures staff conformity to an ethical process • provides clients with expectations 	

- (b) List **four (4)** elements that should be included in the code of conduct for this business.

Description	Marks
Lists four valid elements (1 mark for each valid key element)	1–4
Total	4
Answer could include, but is not limited to:	
Elements of a code of conduct <ul style="list-style-type: none"> • introduction statements • privacy of company information • privacy of client information • misuse of computer system provisions (hardware and software) • personal use provisions 	

4. Create a context diagram of the bookings system for Carl’s Cosy Cottages.

Description	Marks
Provides the correct label for the external entity	1
Provides the correct label for the system name	1
Correctly labels the data flows (1 mark for each of the data flows in the scenario)	1–7
Context diagram conventions correctly applied (use of data flows, entity, system)	1
Total	10



5. Describe **two (2)** visual interface design considerations that need to be incorporated into the design of the data input form when creating the form for the bookings database.

Description	Marks
Provides a detailed description of two valid design considerations	5–6
Provides a brief description of two valid design considerations	3–4
Lists two valid design considerations	1–2
Total	6

Answer could include, but is not limited to:

Possible visual interface design considerations

- display
 - use of colour (background and labels)
 - layout
- data entry
 - logical entry
 - ease of data entry and correction
 - flexibility for different forms of data entry
- guidance
 - appropriate use of labels
 - instructions to assist data input
 - correct for incorrect data input (masking)

6. Use the partly completed diagram below to create a booking enquiry form for the bookings database. Complete and annotate the diagram below, to indicate the following: input fields including labels, use of colour for both text and the background.

Description	Marks
Provides appropriate annotations to indicate text colour scheme	1
Provides appropriate annotations to indicate background colour scheme	1
Placement of input boxes is in a logical order	1
Includes required field labels	1
Includes appropriate fields (up to 4)	4
Total	8

Carl's Cosy Cottages Booking Enquiry	
User help instructions: Enter the expected arrival and departure dates.	
Name	<input type="text"/>
Arrival date	<input type="text"/>
Departure date	<input type="text"/>
Contact details	<input type="text"/>
Bike request	<input type="text"/>

7. Carl's Cosy Cottages plans to enable booking enquiries to be available online. Describe **two (2)** issues related to the use of online databases that the owners of Carl's Cosy Cottages will need to consider.

Description	Marks
Provides detailed description of two issues	5–6
Limited description of two issues	3–4
Lists two issues	1–2
Total	6
Answer could include, but is not limited to:	
Issues related to the use of online data bases could include: <ul style="list-style-type: none"> • privacy of data • accessibility of data • requires development of maintenance of website and online database • operates 24 hours – systems required to ensure customer enquiry • requires specialist software to ensure data security 	