



OFFICE OF TASMANIAN  
ASSESSMENT, STANDARDS  
& CERTIFICATION

Tasmanian Certificate of Education  
External Assessment 2016

PLACE YOUR CANDIDATE  
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# INFORMATION SYSTEMS and DIGITAL TECHNOLOGIES

(ITS315113)

## Time allowed for this paper

- Working time: 3 hours
- Plus 15 minutes recommended reading time

Pages:	8
Questions:	8

## Candidate Instructions

1. You **MUST** make sure that your responses to the questions in this examination paper will show your achievement in the criteria being assessed.
2. There are **TWO** sections to this paper. Each section contains **ONE** case study.
3. You must answer **EIGHT** questions in total.
  - **ALL** questions from **Section A**.
  - **ALL** questions from **Section B**.
4. The recommended time to be spent on a section is given in the instructions in that section.
5. All written responses must be in English.

On the basis of your performance in this examination, the examiners will provide results on each of the following criteria taken from the course statement:

- Criterion 1** Demonstrate knowledge and understanding of how real world information problems are analysed and solved.
- Criterion 2** Demonstrate knowledge and understanding of the components of an information system, and their inter-relationships.
- Criterion 3** Demonstrate knowledge and understanding of social issues associated with information systems.
- Criterion 5** Use and evaluate an information system.
- Criterion 8** Communicate ideas and information in a variety of forms.

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## TECHNOLOGY INSTRUCTIONS

You must complete all your answers using an appropriate software program.

You are required to save your response to both sections in **one** file on the USB memory stick provided to you.

The file title **MUST** be your TASC ID Number, eg, 12W12572. This ID number must also be shown in the footer of your document.

You should save your file regularly whilst working. (Check the date and time stamp of your saved file prior to completion).

If the file is not saved correctly, and **cannot** be accessed on the USB drive, it **cannot** be assessed and TASC takes **NO** responsibility for the inability to assess your work.

When you have completed the exam you **MUST** also save the final version of your file in pdf format on the provided USB memory stick.

In this examination you may use the internet to assist in answering Section A and are expected to use the internet when researching your answers for Section B.

Any source of information **MUST** be referenced **after your answer to that question** by supplying URL(s) of the source(s), and by identifying any other communications made, such as email or instant messaging. If you have communicated with anybody via email you **MUST** also include a pdf copy of all emails and their contents as part of the files saved on the USB memory stick.

You **MUST NOT** collaborate with any other candidate undertaking this examination or teacher of this subject, either verbally or electronically. To do so will mean that you are considered to be in breach of the TASC External Assessment Rule. Penalties will apply.

# SECTION A

Answer **ALL** questions in this section.

It is recommended that you spend 70 minutes answering the questions.

This section assesses **Criteria 1, 3, 5 and 8**.

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## **Case Study:**

Tassie Couriers has been operating in Tasmania for the past 42 years. They offer a variety of services including express pickup and delivery of documents and small packages, such as legal contracts and paperwork, within the Hobart and Launceston metropolitan areas. They also pickup and deliver packages and freight throughout the state. They have two depots, one in Hobart and the other in Launceston. They employ a number of drivers and maintain a fleet of vehicles ranging from small motorcycles to large cargo vans.

Twenty years ago, the owner decided to have a standalone database developed to improve the efficiency of his business. Two years later, he opened the Launceston depot which also runs a copy of the same database. These databases can only be operated by a single user at a time and they are used to record all aspects of the business including bookings, invoicing, customer contact details, salaries etc.

Currently the only way for customers to book pickups and deliveries is to ring the depot. The job data is then entered into the database by the office clerk. The clerk at each depot manually creates a pickup and delivery list for each driver. Drivers generally depart the depot at a scheduled time each day except for express deliveries, which depart on demand. When freight is being sent from the south to the north of the state (or north to south), the clerk will email the clerk in the other depot with the details of each delivery so that their database can be updated appropriately.

Tassie Couriers has had the same website for the past ten years, which simply details their contact phone numbers and locations, along with the services they offer.

**Section A continues.**

## Section A (continued)

Answer the following with reference to the case study.

### Question 1 (20 minutes)

*This question assesses Criteria 5 and 8.*

The owner recognises that while his business has made use of technology, it is not running as efficiently as it possibly could. He has approached you and your team of fellow IT students to help him by taking on a project to improve the way in which transactions occur.

With reference to the current system for booking and managing transactions:

- (a) Evaluate the current information system (data, equipment, people and procedures) by listing the positives and negatives in a table.
- (b) Identify and detail possible improvements that could be made to the current information system as described in the case study above.

### Question 2 (30 minutes)

*This question assesses Criteria 1 and 8.*

- (a) In the context of the case study and your answer to Question 1 (b) above, describe in detail what you and your team would do during the Initiation phase of the Project Lifecycle (PLC).
- (b) In the context of the case study and your answer to Question 1 (b) above, describe in detail how you would work with Tassie Couriers on the Analysis Stage of the Systems Development Life Cycle (SDLC).
- (c) In the context of your proposed improvements, what are the PLC activities you would do with Tassie Couriers when it came to working on the Execution part of the project?

### Question 3 (20 minutes)

*This question assesses Criteria 3 and 8.*

- (a) What would be the potential social and legal implications for Tassie Couriers, and their customers, in moving from two stand-alone databases to an inter-connected shared system?
- (b) The owner is concerned that some employees are checking their personal email, using the internet and making personal calls during business hours. He is considering implementing a policy which prohibits this practice during work hours. Discuss the ethical implications of this decision. What advice would you give him regarding this decision?

## SECTION B

Answer **ALL** questions in this section.

You may need to refer to the **Section A Case Study** when answering the questions in this section.

It is recommended that you spend **20 minutes** researching and then a further **90 minutes** answering the questions.

This section assesses **Criteria 1, 2, 3, 5 and 8**.

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### **Case Study:**

Tassie Couriers are concerned that they have been losing customers lately and they are keen to revamp the way they interact with their clients. The owner believes they can regain a market edge by providing customers with feedback as to the delivery progress of their items. In some cases time can be critical, especially for the express delivery of legal documents and contracts. At the moment customers are only given an approximate time of delivery verbally when they book the service. No feedback or delivery information is currently provided for normal freight deliveries.

The owner is keen to employ a range of modern communications technologies to provide customers with real-time tracking of their deliveries.

Briefly research examples of similar businesses or organisations that provide delivery tracking information to customers.

### **Question 4** (20 minutes)

*This question assesses Criteria 2 and 8.*

- (a) List **two** URLs of businesses or organisations that approach the task of providing product tracking information to customers in different ways.
- (b) By discussing the various parts of an Information System (**data, equipment, people, and procedures**) found in **each** of the **two** sites you have researched, make a comparison/analysis of the suitability of each to meet the needs of Tassie Couriers. State any assumptions that you have made.

**Section B continues.**

## Section B (continued)

### Question 5 (10 minutes)

*This question assesses Criteria 5 and 8.*

Considering your two researched systems and the needs of Tassie Couriers:

- (a) List **two** benefits of each system.
- (b) List **two** disadvantages of each system.
- (c) Make a judgement as to which of the researched systems you believe would be most suitable for Tassie Couriers.

### Question 6 (20 minutes)

*This question assesses Criteria 2 and 8.*

Based on the information you have researched in Question 4, as well as any other suggestions you may have, describe a **unique and feasible** Information System which could be implemented to achieve Tassie Courier's goal.

- Address all parts of an information system (data, equipment, people and procedures).
- Use a variety of ways to describe how the new system would both look and function.
- Consider using graphics and/or diagrams to help your explanation.

### Question 7 (20 minutes)

*This question assesses Criteria 1, 5 and 8.*

- (a) Describe in detail the SDLC processes and methods you would plan to use in the development stage for the new system.
- (b) List and describe the test criteria you would use to check that the new system you proposed is working correctly.

### Question 8 (20 minutes)

*This question assesses Criteria 3 and 8.*

Consider the various stakeholders of the new system.

- (a) The owner has recently had a number of staff retire and he is keen to find reliable new employees. He intends to screen prospective new employees, for example by running checks on Facebook, Twitter and other social media. Discuss the social, legal and ethical issues of screening potential employees in this manner.
- (b) The owner has some concerns about the security of the new proposed system. Briefly outline the legal responsibilities that the owner has with regards to protecting the personal and confidential data stored within this new system.



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