ASSESSMENT REPORT

ITS31518 INFORMATION SYSTEMS AND DIGITAL TECHNOLOGIES

General Comments

The 2019 paper provided a case study relevant and easy to understand in the context of a small business, Bike North / Bike TAS. Candidates would have encountered similar examples in mid-year and practice exams with the format of the paper being familiar.

There was a varied range of responses to the questions but pleasing to say the paper was generally handled well by the candidates.

Some general points to consider:

- Candidates need to be fully aware of which Criterion/Criteria being assessed in each question as this will guide their answer more appropriately. In some situations, good (for other criteria) but irrelevant answers were provided in some questions.

- Candidates need to understand the differences in “English terms” for what is required in various questions. For example: Summarise, list, describe, evaluate, explain, discuss, compare, analyse, judge, address and identify do not mean all the same thing.

- Candidates need to pay attention to the time allocation for each question and manage their time appropriately. Several candidates provided more detail than was expected for a question and other answers not providing enough detail.

- Candidates need to read the questions carefully and address the case study explicitly. This is important to indicate to the markers that the candidates are thinking about solutions for the case study, and simply not copying and pasting course notes.

- There was detail missing is some of the specific, theory-based questions. Confusion was also demonstrated between the Project Life Cycle and the Systems Development Lifecycle.

- There was confusion around the differences between social, legal and ethical issues for candidates when answering the Criterion 3 questions. Better answers explicitly grouped issues into the correct category.

- As in 2018, very few candidates wrote about ‘Data Flow’ as being crucial in an effective Information System and how (when data is handled correctly) this would ensure that the entire system is functional. The difference between ‘Raw Data’ and ‘Information’ was not described well.

- Markers were looking for evidence of a thorough understanding in order to obtain the higher ratings. For example, candidates required more depth about the State and National laws in Australia in relation to privacy.
Several candidates used online drawing editors such as draw.io to create flowcharts and other diagrams. This worked well and is encouraged. Other candidates were able to use screen shots to help in answering some questions.

In Section B – research section, it was apparent once again that many candidates simply searched for a common term and reported back on the first link/system returned. It would service candidates better to take their time and look through the first three or four pages to find a system which may be a better fit.

Searching techniques could also be improved by searching for reports in the .pdf format.

Several candidates struggled with describing a unique and feasible Information System, and heavily relied on what was researched only.

To get full marks for criterion 8, candidates had to write clearly and effectively using technical terms where required; use diagrams; incorporate tables where appropriate and display referenced URLs in the questions throughout the paper.

Sample Solutions

A range of sample answer ideas are provided here that would need to be built upon during a 3hr exam. There are many more possible answers not included in this summary.

**Question 1 (20 minutes): Criteria 2, 5 and 8**

(a) Candidates should extract, from the case study, relevant information to each of the four parts of an Information System, e.g. *procedures* – data is manually entered into a spreadsheet “the system” by *people* – admin person etc. This would be best represented in a table format.

(b) Positives simple system, easy to use.

Negatives data not linked means more user effort is required, time consuming, possibility of user error such as double booking etc.

(c) Candidates should be able to identify many ways in which the current system could be improved. Important that they not only identify the improvement, but that they detail how they would go about making the improvement. e.g. Current system requires excessive handling of information i.e. bookings in one sheet, customer data in another and the revenues raised in a third. This data is manually entered into each sheet, instead they could employ a centralised online database or accounting software to incorporate all processes etc. Candidates should not just recommend new parts of a system. (i.e. online booking, websites etc).
Question 2 (40 Minutes): Criteria 1 and 8

In answering the four parts to Question 2 candidates should not be copying and pasting from course notes or the Internet. Ideas should be based around the course document as per:

(a) Planning Phase (PLC): this phase identifies the project manager and team, sets up planning and documentation activities and organises the resources required to produce the outputs of the project.

(b) Design Stage (SDLC): based on the Analysis stage, system and software design is considered. This may include considering hardware and system requirements and overall system architecture. The evaluation criteria are also developed.

(c) Development Phase (SDLC): configuration, coding, validation, testing and documentation are undertaken.

(d) Closure Phase (PLC): this phase is where the completed project outputs are handed over to the client. This includes technical manual and end user documentation. Closure also includes showing that costs have been paid, resources re-allocated and the project team disbanded. A closure report which includes a review of the process formally closes the project.

Question 3 (20 Minutes): Criteria 3 and 8

(a) **Social:** educating staff on appropriate privacy practices, loss of employment due to more efficient system, training staff on new procedures, outsourcing during development, censorship and user management levels

**Ethical:** Decide what data is required to run the business then limit data collection to this. Avoid collecting data because it may be useful. Data ought only to be used for the purpose that it was collected for. Ethical dilemmas – what happens if you have access to information that you shouldn’t, or your manager is requesting you to take an unethical approach.

**Legal:** Legally responsible to protect confidential data – The Privacy Act 1988. Copyright law & passing off law. Domain and IP regulations and issues (AUDA).

(b) Candidates should be able to discuss that the Mandatory Data Breach Notification Scheme (2018) legally applies to small businesses with turnover > $3M so Bike TAS would not be bound by this. However, the steps taken by the business upon detection of a data breach should be like those businesses that are legally bound, in order to protect the reputation of their business.
Question 4 (15 Minutes): Criteria 5 and 8
(a) Important that candidates choose two (markedly) different systems/processes otherwise it will be difficult to compare/contrast the two. Fifteen minutes should give enough time to view a wide range of systems that may provide the required functionality. Two URL’s need to be listed.

(b) This question should be a straightforward comparison/analysis of the two selected sites. Best presented in a table format. Important to address all four parts of an Information System. Candidates need to talk specifically of the suitability of each system in the context of the case study.

Where information is not readily visible candidates should be able to fill in gaps with their understanding of what would be required e.g. Equipment - no details listed on the website but the company would be employing a high end webserver to host its content, this is most likely provided by a third party given the logo at the bottom of each page and the volume of traffic this site is expected to handle etc.

Question 5 (10 Minutes): Criteria 5 and 8
(a) Self-explanatory
(b) Self-explanatory
(c) Important that candidates pick one of the two and that they make a judgement why they have done so in the context of the case study.

Question 6 (15 Minutes): Criteria 2 and 8
In this question, candidates can combine their research to produce a unique and feasible system that they think will best meet the needs of the client. It is important that they describe how each part of the system will be addressed e.g. a new online booking website (equipment) will be established. Clients (people) will enter bookings (procedures) via a new web interface etc.

The types of systems suggested can vary widely depending on the background of the student and their capabilities e.g. custom-built solutions using MS Access, MySQL, or other appropriate applications through to Open Source solutions which may be modified to meet client needs through to engaging firms which provide Software as a Service (SaaS).

This question provides an ideal opportunity for candidates to communicate (Criterion 8) in ways other than text and can be a discriminator for higher ratings on this criterion.

Candidates need to keep the case study front of mind when describing the new system.

Question 7 (10 Minutes): Criteria 1, 5 and 8
(a) Candidates need to ensure that they do not simply create a template response i.e. just copy sections from the notes as to what happens in this stage. Their response should be set in the context of this new Information System as outlined in Question 6.
Development Phase (SDLC): configuration, coding, validation, testing and documentation are undertaken.

(b) Critical that the candidates relate their answer to the context of this new system not just some generic test criteria. A test plan should be created, using a table format with suitable headings such as:

<table>
<thead>
<tr>
<th>Test Number</th>
<th>Test Name</th>
<th>Date</th>
<th>Test</th>
<th>Expected Result</th>
<th>Action</th>
<th>Completed</th>
</tr>
</thead>
</table>

Question 8 (20 Minutes): Criteria 3 and 8

(a) Issues:

**Online Marketing**
- Social: May annoy/harass people; non inclusive; sexist/racist messages.
- Ethical: Unethical business tactics used; targeting incorrect groups of people.
- Legal: IP and copyright issues; model release and photography issues.

**Email Campaigns**
- Social: Addiction; inclusiveness.
- Ethical: Incorrect email subject lines; clickbait; buying selling email lists.
- Legal: Spam Act 2003 applies, need to embed unsubscribe option within emails. No sending of unsolicited email.

**Social Networking**
- Social: Negative posts may hurt reputation of the business.
- Ethical: Passing off issues; addiction; ethical dilemmas.
- Legal: Business could be held liable for any comments/posts which are made to their page, hence need moderator to deal with these quickly.

(b) Candidates should be able to address some of the following:

- Social: Educating them on appropriate privacy practices training and documentation; real world scenarios.
- Ethical: What data is required to run the business? Limit data collection to this and avoid collecting data because it may be useful for any other purpose. Data ought only to be used for the purpose that it was collected for.