LA TROBE LAW SCHOOL

FINAL EXAMINATION

SEMESTER 2, 2021

INTRODUCTION TO FORENSIC SCIENCE AND THE LAW LCR2FSL

RELEASED: 15 OCTOBER 2021 AT 6:00PM

DUE: 2 NOVEMBER 2021 AT 5:00PM

INSTRUCTIONS

A. FORMAT AND TIMING

This exam is worth 50% of your final mark in this subject.

You have until 2 NOVEMBER 2021 AT 5:00PM to COMPLETE this exam.

- The indicative word count for this exam is 2,000. As this word count is indicative only, there is no penalty for exceeding or not meeting this word count.
- Students with alternative exam arrangements should comply with the timing of those arrangements.

The exam consists of **A PROBLEM WITH GUIDED QUESTIONS CONCERNING A CRIME SCENE AND A SERIES OF SHORT ANSWER QUESTIONS**:

- ***Part A consists of ONE (1) problem based question. You must answer this question. This part is worth 50 marks in total.***

- ***Part B consists of FIVE (5) short answer questions. You must answer all of these questions. This question is worth 50 marks in total.***

In answering the questions on this exam, it is prudent to divide your time in accordance with the marks available for each part of the exam.

B. ACADEMIC INTEGRITY

You should not do anything that compromises the academic integrity of the at-home exam process. Activities that you should not undertake during the exam time-window (whether or not you have accessed a copy of the exam) include:

- Discuss or share the contents of an exam paper with any other person in any way;

- Discuss the subject matter of an exam with any other person in any way;
- Exchange any information about or answers for the exam with any other person;
- Undertake the exam in close enough physical proximity with any other person to allow that other person to see the answers you have drafted.

You must not at any time engage any other person to undertake any part of an exam on your behalf. ***Do not engage with any contract cheating sites or operators.***

C. TECHNICAL ISSUES

To address potential technical issues in relation to the exam, particularly at the start and end times of exam windows, this exam will adopt the following process:

Exam Availability and Queries

- A copy of the Exam will be available via the LMS at 6:00PM on 15 October 2021
- Students will be required to complete an online academic integrity declaration when submitting the Exam.

Exam Submission

- Exams should be uploaded via the link on the LMS.
- To minimise the possibility of overloading the LMS, aim to upload your exam 15-20 minutes before the closure of the exam time window.
- If you are unable to upload your exam to the LMS, email a copy of your exam to Dr Sheehan as soon as possible.
- **Note: Late submission of take home examinations is not permitted under the Assessment (Late Submission of Tasks) Policy Sections 1 and 3 at [5] and [9].** https://policies.latrobe.edu.au/document/view.php?id=148

Other Technical Advice

Save your exam answers regularly while you are writing them.

In the event that you encounter severe technical difficulties with an at-home exam and wish to apply for special consideration, please do the following:

- Take a screen shot or photograph of the computer screen, any error messages etc.
- Try to find a record of any relevant external event eg internet service outage or electricity provider records.
- Submit this evidence via the University special consideration process within the required timeframe. https://www.latrobe.edu.au/students/admin/forms/special-consideration

Remember that the usual outcome of a special consideration application for exams is attempting a special exam at a different time. Special exams for this subject will also be 'take-home' exams, scheduled for the supplementary exam period.

D. FORMATTING AND REFERENCING

You do NOT need to comply with AGLC for any aspect of at-home exams.

Exams should be submitted as Word or PDF documents. Format your exams as a standard piece of writing:

- A4 margins;
- 12-point standard font;
- 1.5 spacing;
- You do not need to provide a cover page.

Use headings and sub-headings, and arrange your text in as structured a format as possible.

- Direct quotes should be identified with 'quotation marks'.

You will not be penalised for poor formatting unless that formatting prevents the marker from assessing the answers in some way (in which case the penalty will arise from the problems with the answer, rather than from the formatting).

Research

You are encouraged to confine your answers to the material covered in this course. That includes the readings, the lectures, the slides, the video/audio material and the case studies, where relevant. There are also further resources referenced on your reading list. If you think any of that material would be of assistance to you in answering your exam, then you are welcome to locate the material and use it.

In summary, you are encouraged to confine your answers to the material mentioned above but you are not prohibited from undertaking further research over and above the materials mentioned above. No marks have been allocated for independent research.

D. EXAM ASSESSMENT CRITERIA

Part A Question will be assessed according to the following criteria:

a) How well your answer identifies the relevant principles applicable to the scene analysis and interpretation (50%);

b) How well your answer applies those principles to analysing the scene (40%); and

c) Clarity in writing with appropriate spelling, grammar and formatting (10%).

Part B Questions will be assessed according to the following criteria:

a) The depth of understanding reflected (60%);

b) Whether the answer is structured in a logical and well-organised manner (30%); and

c) Clarity in writing with appropriate spelling, grammar and formatting (10%).

EXAM COMMENCES OVER THE PAGE

TAKE HOME EXAM QUESTIONS
(You must answer **all** questions in **BOTH PART A AND PART B**)

PART A (50 Marks in total)

Read the following Background and review the images provided and answer the questions.

BACKBROUND

A crime occurs after a domestic dispute at a home on the outskirts of an urban area.



Figure 1 - The Home

At approximately 7:30PM on Friday 15 October 2020 the neighbours hear yelling and what sounds like fighting, but the couple frequently gets into loud arguments, so no one takes any particular notice.

The noises and shouting end within a few minutes after one neighbour reports hearing a loud sharp sound that might have been a gunshot. However, none of the other neighbours report hearing that sound.

At approximately 8:30PM on Friday 15 October 2020, one of the neighbours sees the husband's red pick-up truck (**Figure 2**) leaving the house (**Figure 1**) at a high rate of speed, which is also typical behaviour for this couple.

At approximately midday on Monday 18 October 2020, a friend of the wife comes to the house to check on her welfare. She has not been at work and she does not answer her phone, respond to texts, or answer voicemail. When the friend gets no response to knocking, she calls the police.

A police unit arrives to make a welfare check. They make entry and discover the house in disarray and copious amounts of what they suspect is dry blood in several locations.

The first responder (the police officer making entry) searches the house and surrounding area to be sure no one is there and that medical assistance is not required.

The officer then calls for assistance, which includes the Police Forensic Services Department (**FSD**).

The official investigation begins.

Within hours, detectives learn of the arguments and events of the night of the victim's disappearance and they begin to search for the husband.

They learn that he was seen at a Bunnings Hardware store the day after the victim went missing and obtained CCTV video from the store to confirm.

The police department declares him a "person of interest" and publishes his photo.

A week later, the manager of a motel sees the photo on social media and recognizes the man as one of his guests and calls police.

The suspect is arrested within hours of the call.

The police find his red pick-up truck at the motel, impound it, and deliver it to the crime laboratory for processing.

They perform a search of the motel room and locate three mobile phones, a laptop and a disassembled automatic pistol.



Figure 2 – Red Pick-up Truck outside Motel

Over the course of the investigation, police learn that the suspect likes to go camping and fish at a lake on a remote parcel of forest outside the city.

Nearly a month after the woman's disappearance, they take a trained cadaver dog to the site, along with volunteers to help search the area.

After extensive searches of the area over several days, they locate a remote area that appears to have been recently disturbed and a fire pit area that contains ashes, wood remnants, and partially burnt beer cans.

QUESTIONS

You are a crime scene investigator with the FSD and you are called to attend the home to process the scene on 18 October 2021.

You have two (2) other technical staff with you that you can assign various duties to in your discretion and you have access to a mobile laboratory. Assume that you have an excellent budget and have access to whatever equipment and materials that you require to perform your duties as well.

Below you will find images of the scene to assist you and which you can refer to in answering the questions.

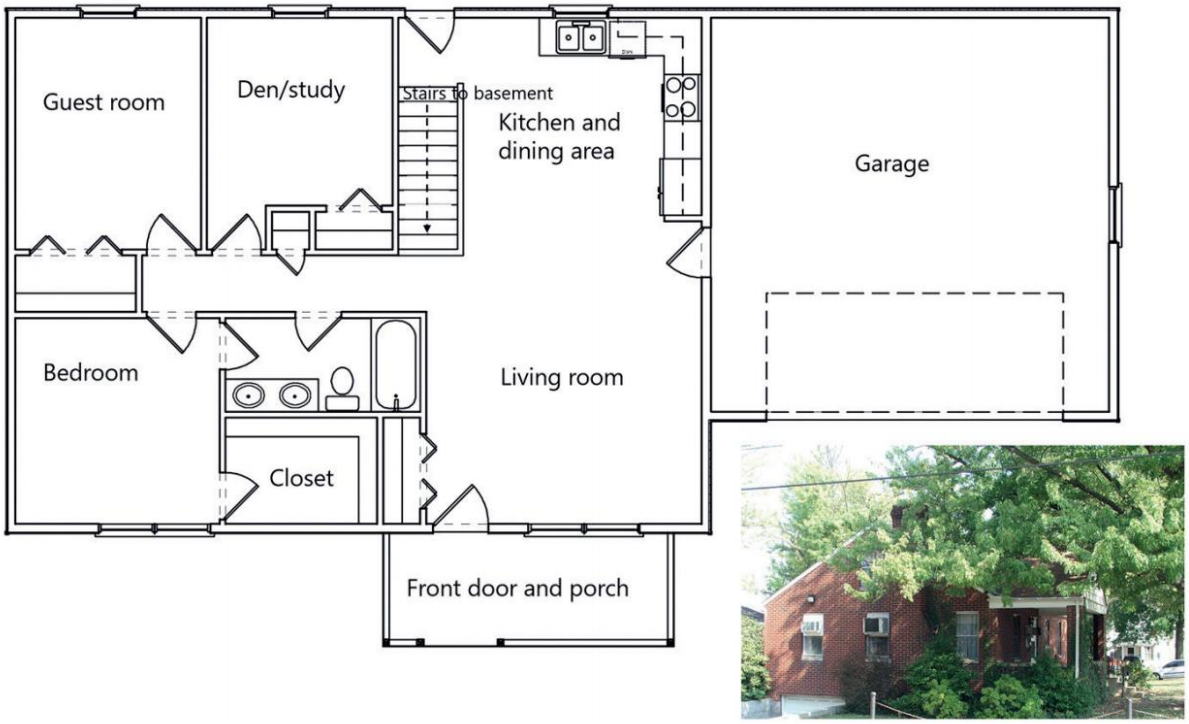


Figure 3 – Floorplan of the Home

Question 1

On your arrival with your team at the Home (**Figure 3**) you are standing at the edge of the property on the footpath. Describe in detail the sequential steps you would take in preparing for and analysing the crime scene, including allocating any work to your team members. **(8 Marks)**

You have designated zones in the House as 1 through 6 as in **Figure 4**. These are:

1 – Garage area;

2 – Front door and porch area;

3 – Den/Study;

4 – Bedroom;

5- Kitchen and dining area/living room;

6 – Front and side yard.

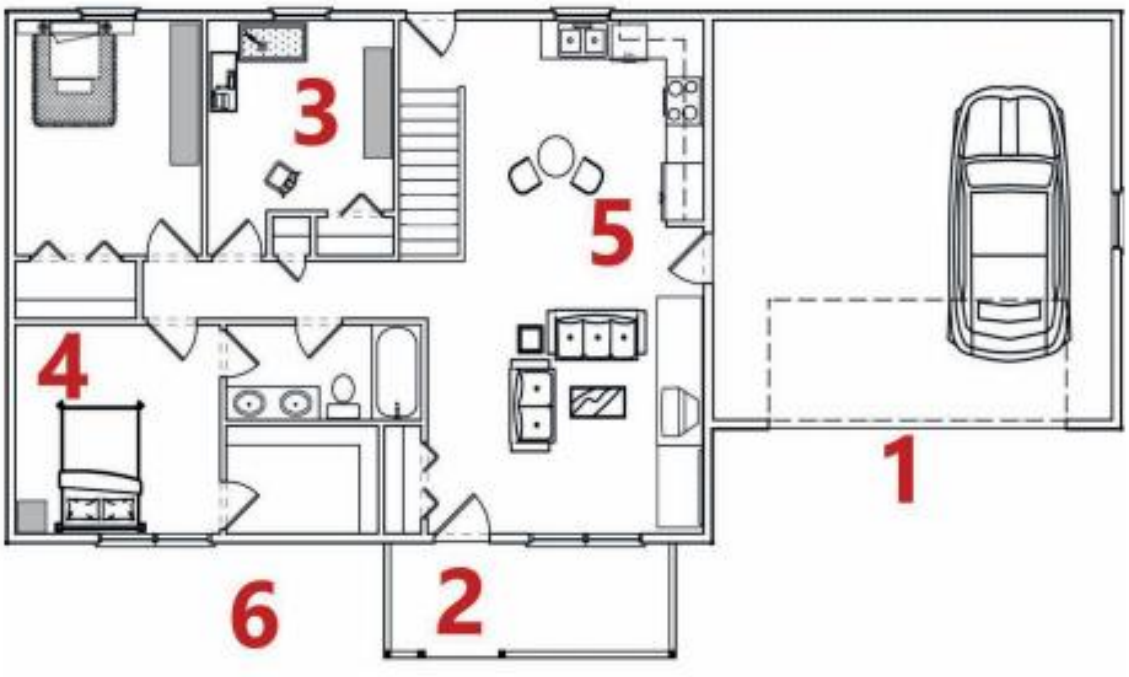


Figure 4 – Marked zones of the Home Floorplan

Question 2

You have identified evidence from each zone as shown below in Figures 4, 5 and 6.

In zone 1 (**Figure 5**) you identify:

a. Bloody boot/shoe mark/print/mark;

b. 3.5 centimetre blood spatter drop;

c. 5x cigarette butts;

d. 1x bullet cartridge;

e. 1x slip on footwear.

With each piece of designated evidence describe what you would do with it and what (if any) further test(s) and/or analysis(es) you would perform and/or request to be performed and why. **(8 marks)**

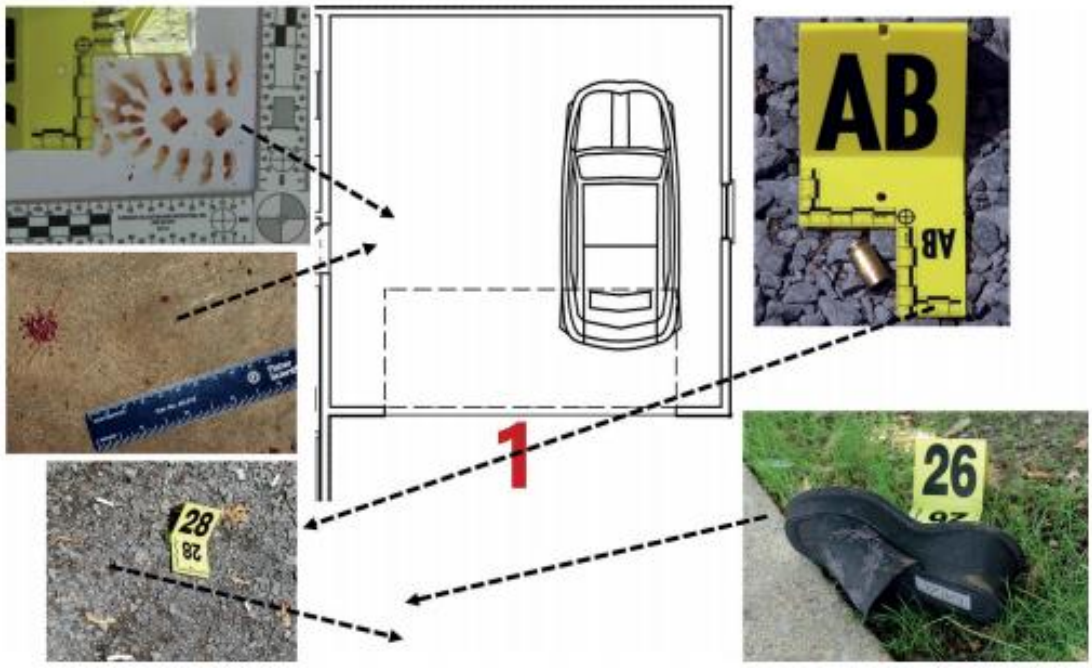


Figure 5 – Evidence identified in Area 1

Question 3

In zones 2 and 5 (**Figure 6**) you identify:

a. White powder on the kitchen table which is positioned approximately centrally in the room;

b. 14 x 3.5 to 5 centimetre red coloured droplets on floorboards over an area of 30 centimetres positioned approximately left centre area of the room;

c. 250 x 0.5 to 1.5 centimetre red coloured droplets on floorboards over an area of 140 centimetres positioned near the kitchen table approximately centre of the kitchen area;

d. Red coloured splatter pattern on the refrigerator door next to doorway far right of the kitchen area;

e. Red coloured smear on floorboards at doorway in far right of the room;

f. Glass table in the living room area approximately centre of the area with empty syringe packet and syringe with red coloured substance inside approximately 1 to 2 millilitres and white powder in 5x 9 centimetre parallel lines.

With each piece of designated evidence describe what you would do with it and what (if any) further test(s) and/or analysis(es) you would perform and/or request to be performed and why. **(10 marks)**

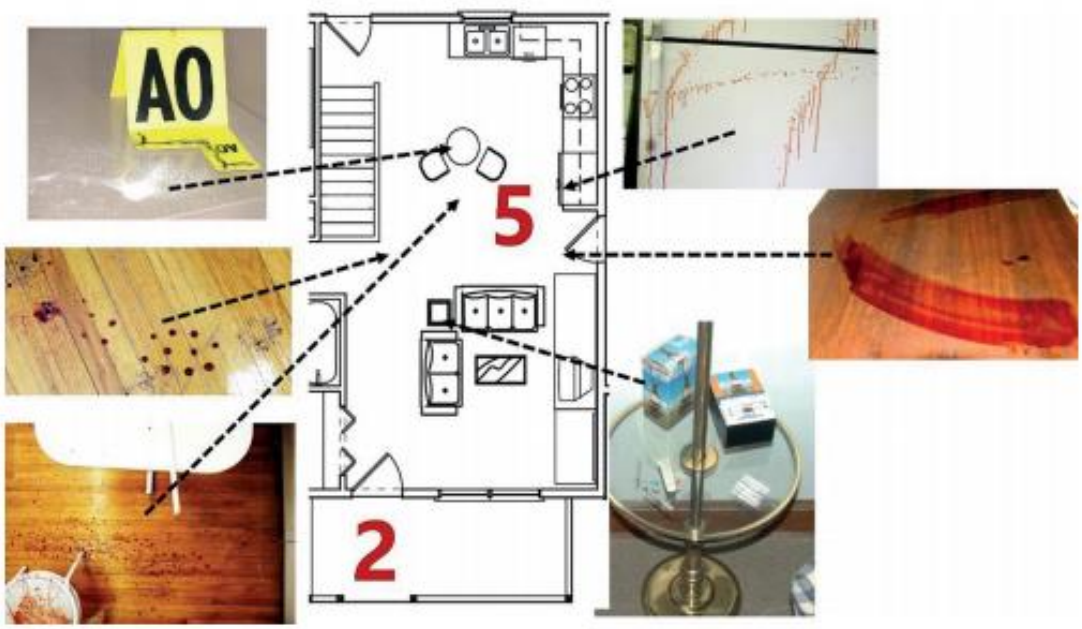


Figure 6 – Evidence identified in Areas 2 and 5

Question 4

In zones 3, 4 and 6 (**Figure 7**) you identify:

a. 30 centimetre marking on door frame entry to area 3;

b. Pink cloth with red coloured substance on the floor in the en-suite of area 4;

c. Markings on the door and separated door knob on the door of area 3;

d. 6x used syringes on the floor of area 3 (3x red coloured substance inside the syringe, 1x white coloured substance inside syringe, 2x no apparent substance inside syringe.

With each piece of designated evidence describe what you would do with it and what (if any) further test(s) and/or analysis(es) you would perform and/or request to be performed and why. **(8 marks)**

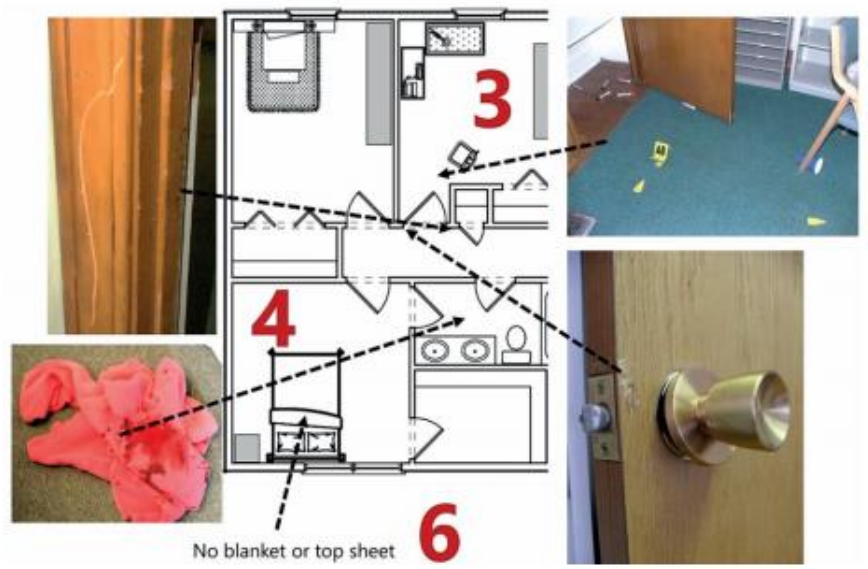


Figure 7 – Evidence identified in zones 3, 4 and 6

Question 5

At the motel you identify (**Figure 8**):

a. 1x laptop (PC) on the motel bed;

b. 3x mobile/cell phones in total, 1x mobile/cell (Android) phone next to the laptop on the motel bed and 2x mobile/cell (Apple) phones on table in the motel room;

c. 1x Ruger P95DC automatic firearm serial number filed off and dismantled.

With each piece of designated evidence describe what you would do with it and what (if any) further test(s) and/or analysis(es) you would perform and/or request to be performed and why. **(6 marks)**



Figure 8 – Items found at the motel

Question 6

A search of the pick-up truck (**Figure 9**) identifies:

1. Red coloured substance on the truck door;
2. Long black fibre on the upholstery;
3. Dirt in the tyre tread;
4. A hammer;
5. Bunnings receipt for purchase of various goods including 1xbroomholder, 1x storage kit, 1x large tarp and 1 x plastic sheeting.

With each piece of designated evidence describe what you would do with it and what (if any) further test(s) and/or analysis(es) you would perform and/or request to be performed and why. **(4 marks)**

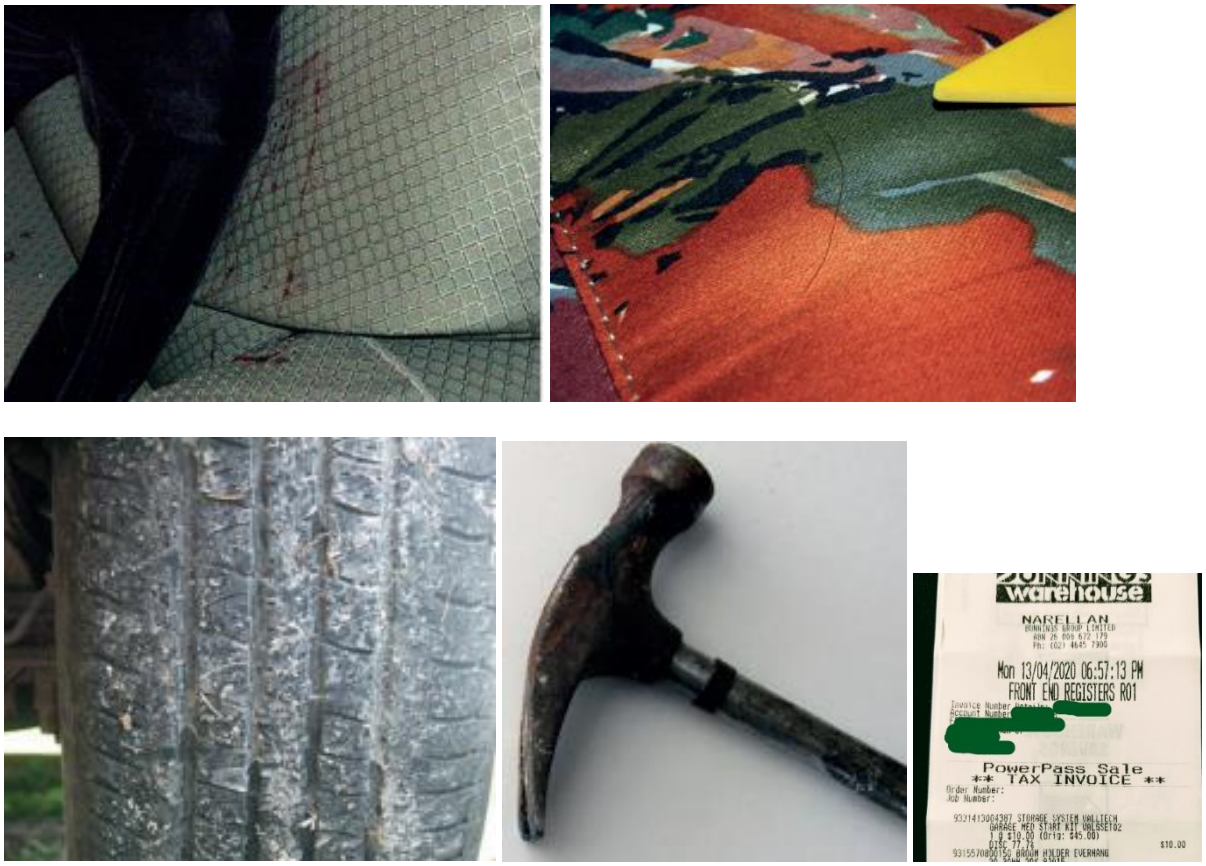


Figure 9 – Search of pick-up truck

18 January 2021, the FSD is called to attend the burial site and to process the scene.

You have two (2) other technical staff with you that you can assign various duties to in your discretion and you have access to a mobile laboratory. Assume that you have an excellent budget and have access to whatever equipment and materials that you require to perform your duties as well.

Below you will find images of the scene to assist you with answering the questions.

Question 7

On your arrival with your team at the burial site describe in detail the sequential steps you would take in preparing for and analysing the crime scene, including allocating any work to your team members.

At the burial site (**Figure 10**) you identify:

1. A body in a shallow grave. The body is wrapped in a layer of black plastic covered by a thick blue tarp. Both the plastic and the tarp appear to be relatively new. The body appears to have been burned, and what little tissue remains is significantly decomposed and partially skeletonized. You suspect that the body is that of a female, but the degree of decomposition and damage is such that you cannot tell for certain if the remains are that of the wife.

2. Tyre marks and shoe/boot print/mark.

With each piece of designated evidence describe what you would do with it and what (if any) further test(s) and/or analysis(es) you would perform and/or request to be performed and why. **(6 marks)**



Figure 10 – Burial site area and tyre marks

PART B (50 Marks in total)

Question 1

Looking at the scenario described in Part A, two competing theories (stories) develop. The first is that of the investigators, who believe that the suspect killed his wife, put her body in the truck, drove to the remote area, and buried the body before attempting to hide out in the hotel where he was arrested. The other story is that of the suspect, who claims that although he did argue with his wife and drive off in a rage, he did not kill her. He claims that he was feeling sick and wanted to get away from arguing and stayed in the hotel for a few days to rest and to give his wife time to "settle down" after their argument. He is adamant that she was alive and well when he left her at the house, alone. Looking at the evidence that may be collected, evaluated and interpreted in Part A, which theory do you favour? Why? If your answer is dependant upon the result(s) of analysis(es) of any of the evidence, or if any further analysis of any of the evidence, or crime scenes is required, you should identify this in your answer and indicate what further analysis and/or testing you would require as well.

(10 marks)

Question 2

You are called to a crime scene and identify the 2 patterns below (Figures 1 and 2) as evidence. Describe:

1. What you would do with each identified piece of evidence and what (if any) further test(s) and/or analysis(es) you would perform and/or request to be performed and why;

2. What information you can obtain (if any) from each of the patterns. **(10 marks)**



Figure 1 – Red coloured spatter on a door and wall



Figure 2 – Red coloured spatter in a wall

Question 3

You are a forensic investigator and you are called to a fire scene where a body has been found in the debris at a premises which is situated above a restaurant. Both the premises and the restaurant are destroyed by fire. What types of information could be provided by an autopsy and by post-mortem toxicology that could be used to determine if the victim was alive at the time of the fire, or already dead? Does this information alone allow an investigator to determine if a fire was deliberately lit, or an accident? If not, what additional steps (i.e including but not limited to the scene analysis, evidence identification and collection methods) would an investigator take to determine if a fire was deliberately lit, or an accident?

(10 marks)

Question 4

DNA databases have proven highly successful in identifying and convicting criminals and any concerns over their creation and use is clearly outweighed by their benefit. Discuss using examples.

(10 marks)

Question 5

You are a forensic scientist investigating the murder of a 68 year old man who died from cardiac arrest as a result of massive blunt force trauma to the head (confirmed in the autopsy report). It is likely that a large heavy object caused the injuries, but no such object is located at the crime scene. The police have arrested a suspect who was seen arguing with the victim a few hours before the murder and have provided you with various tools seized from his workshop. These tools are a large spanner, a crowbar and a hammer (all large heavy objects). The crown prosecutor requests that you perform tests to determine if any of the tools could have caused the injuries that subsequently resulted in the death of the victim.

1. What type of tests could you perform to determine if any of the seized tools caused the injuries to the victim?

2. If you are unable to match any of the tools to the injuries suffered by the victim should you tell the prosecutor? Why, why not?

3. The prosecutor reads your report about none of the tools matching the injuries of the victim and says that you will be called to give evidence in court about the injuries and to just say they were likely caused by a large heavy object but not to mention in your report that you did any tests to try and match the seized tools to the injuries suffered by the victim as they are irrelevant to the case. Are you able to give that evidence? Why, why not?

   (10 marks)

END OF EXAM