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**University Hospital, Geelong  
Emergency Medicine  
Trial Fellowship Exam  
Short Answer Questions (SAQ)  
Week 19**

**DIRECTIONS TO CANDIDATE**

1. Answer each question in the space provided in this question paper.
2. Do not write your name on this question paper.
3. Enter your examination number in the space below.
4. Cross out any errors completely.
5. Do not begin the exam until instructed to do so.
6. Do not take examination paper or materials from this room.
7. The booklet binder may be removed during the exam.

**QUESTION & ANSWER  
BOOKLET**

**Question 1 (18 marks)**

A 10 year old girl presents to the emergency department after a fall from the monkey bars after school and complains of a painful elbow.

**An elbow X-ray is taken- refer to the prop booklet page 2.**

a. State four (4) abnormalities shown in this xray. (4 marks)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_

After full assessment, the girl is confirmed to have this isolated injury and is very distressed with pain. She is fasted. She has received no prehospital treatment. She does not currently have IV access.

b. List your approach to analgesia in the first 20 minutes of this presentation. State five (5) points, providing dose and route where applicable. (5 marks)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

**Question 1 continued**

c. List four (4) indications for corrective treatment of this injury in the emergency department. (4 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**Question 1 continued**

An indication for urgent corrective treatment exists.

In preparation for this corrective treatment, you attempt cannulation and fail 3 attempts. The patient's mother becomes very distressed and requests no further attempts at cannulation. She is verbally aggressive towards you. Corrective treatment is still required semi urgently.

d. State five (5) points to demonstrate how you would handle this situation. (5 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

**Question 2 (14 marks)**

A 24 year old woman who is pregnant presents with per vaginal bleeding.

- a. Complete the table, listing the expected findings at each stated stage of a normal pregnancy. (12 marks)

<b>Stage of pregnancy</b>	<b>Approximate Quantative BHCG (3 marks)</b>	<b>Transvaginal ultrasound (3 marks)</b>	<b>Transabdominal ultrasound (3 marks)</b>
<b>5 weeks</b>			
<b>6 weeks</b>			
<b>7 weeks</b>			

**Question 2 continued**

b. State three (3) specific findings on ultrasound that define a failure of pregnancy. (3 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

**Question 3 (12 marks)**

A 65 year old male presents with 4 days of scrotal pain.

**A photo of the patient is taken- refer to the prop booklet page 3.**

a. What is the diagnosis? (1 marks)

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b. What is the significance of this condition? State three (3) points of significance. (3 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

c. List two (2) risk factors for the development of this condition? State two (2) points of significance. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

### Question 3 (Continued)

Analgesia is provided. Disposition is arranged.

- d. List two (2) key treatment steps that you would institute in the first 20 minutes of your care. Provide one (1) justification for each choice. (4 marks)

	<b>Treatment step (2 marks)</b>	<b>Justification (2 marks)</b>
1		
2		

- e. List two (2) treatment methods that are utilised for definitive treatment. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

**Question 4 (12 marks)**

A 25 year old man is intubated for decreased conscious state following a polydrug overdose. The patient remains in your emergency department overnight. Following your ward round in the morning you assess the patient as being suitable for extubation.

- a. List four (4) patient factors that are required to allow safe extubation of this patient. For each factor, state how you would ensure adequacy. (8 marks)

	<b>Patient factor (4 marks)</b>	<b>How would you ensure adequacy of the factor (4 marks)</b>
1.		
2.		
3.		
4.		

**Question 4 (continued)**

You successfully perform extubation.

b. List four (4) steps in your post- extubation care for this patient. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Question 5 (11 marks)**

A 75 year old man presents following a collapse.

**An ECG is taken- refer to the prop booklet page 4.**

a. State five (5) abnormalities shown in this ECG. (5 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**Question 5 (continued)**

b. List six (6) possible causes for this ECG problem. (6 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

**Question 6 (12 marks)**

A 35 year old man presents with right sided facial swelling 24 hours after bilateral wisdom tooth removal.

**A CT is taken- refer to the prop booklet page 5 and 6.**

a. State two (2) abnormal findings in the CT scan slice labelled 1. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

b. State two (2) abnormal findings in the CT scan slice labelled 2. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

c. State two (2) abnormal findings in the CT scan labelled 3. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

**Question 6 (continued)**

d. List six (6) likely complications of this condition. (6 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

### Question 7 (11 marks)

A 74 year old man is brought to your emergency department with 1 week of shortness of breath and chest pain.

His observations are:

BP	135/870	mmHg supine
HR	110	/min
Temperature	38 °C	

**Arterial blood gases and serum biochemical results are taken- refer to the props booklet page 7.**

- a. Provide two (2) calculations to help you to interpret these results. State the significance of each finding. (4 marks)

Derived value 1: \_\_\_\_\_

\_\_\_\_\_

Significance: \_\_\_\_\_

Derived value 2: \_\_\_\_\_

\_\_\_\_\_

Significance: \_\_\_\_\_

- b. Using the scenario and the derived values, state the primary acid/base abnormality/s. State two (2) points. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

**Question 7 (continued)**

c. List five (5) likely unifying causes for these pathological findings for this patient. (5 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

**Question 8 (12 marks)**

A 65 year old man presents with a headache. He has not experienced trauma prior to the headache onset.

His observations are:

BP	255/150	mmHg supine
HR	90	/min
Temperature	37°C	

a. Other than phaeochromocytoma and idiopathic hypertension, list six (6) likely underlying causes for his hypertension. (6 marks)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

You have a strong suspicion of the diagnosis of phaeochromocytoma.

b. List three (3) drugs in your preferred regime to treat the blood pressure in this setting (doses are not required). (3 marks)

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_

**Question 8 continued**

- c. List three (3) investigations that may be performed to assist in confirmation of the diagnosis of pheochromocytoma. (3 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Question 9 (16 marks)**

A 35 year old man presents to your emergency department after a high voltage electrical injury.

**A photograph of the man is taken- refer to the props booklet page 8**

a. State four (4) features of this photograph that suggest a significant injury. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Question 9 (continued)**

b. List six (6) systemic/ distant complications from the passage of high current through the body. (6 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

6. \_\_\_\_\_

c. What is the role of the presenting ECG in household (240V) electrical exposure? State two (2) points in your answer. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

**Question 9 (continued)**

d. List six (6) indications for ongoing ECG monitoring following an electrical exposure. (6 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

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**PROP BOOKLET**

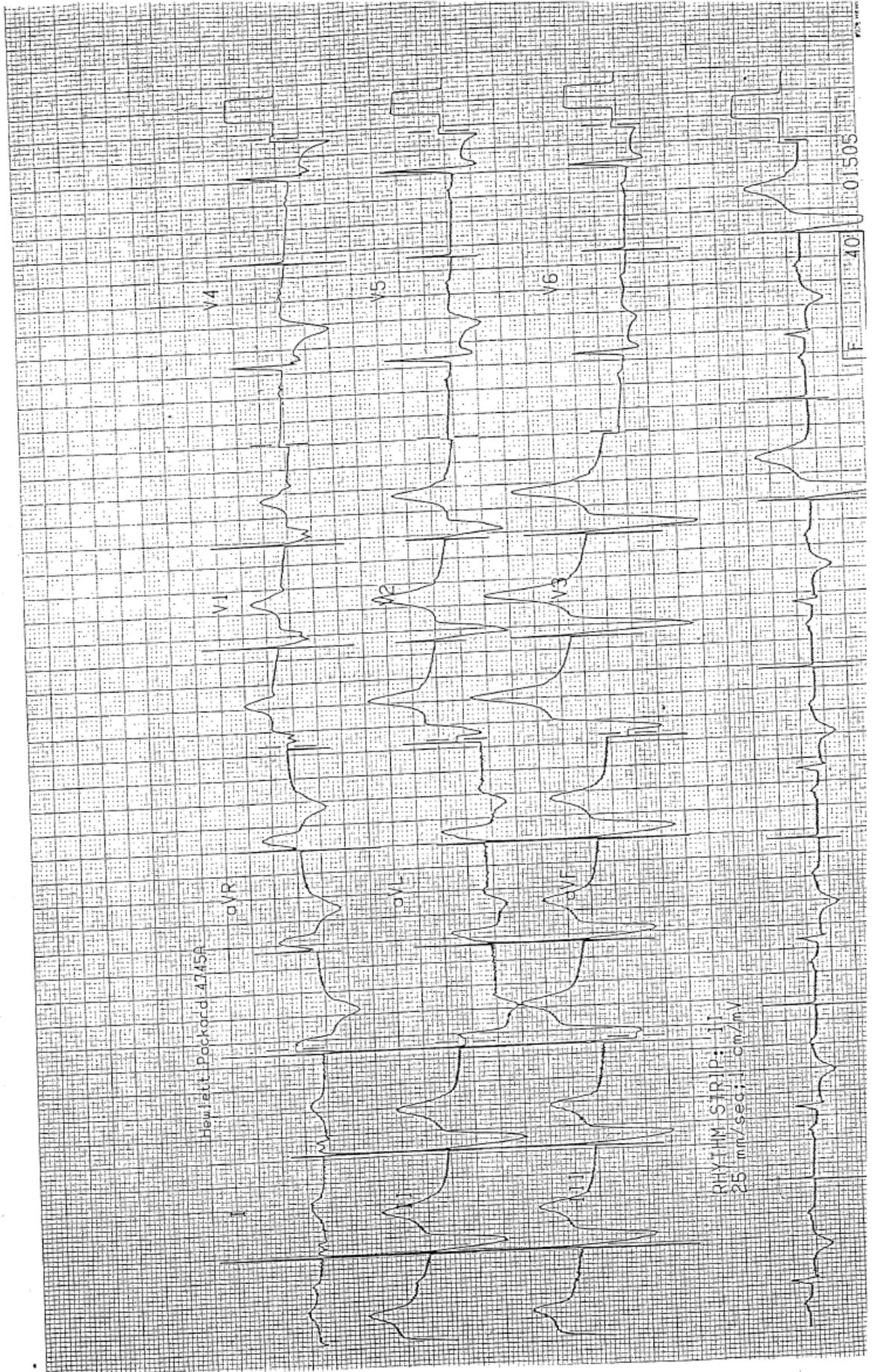
**Question 1**



**Question 3**



Question 5

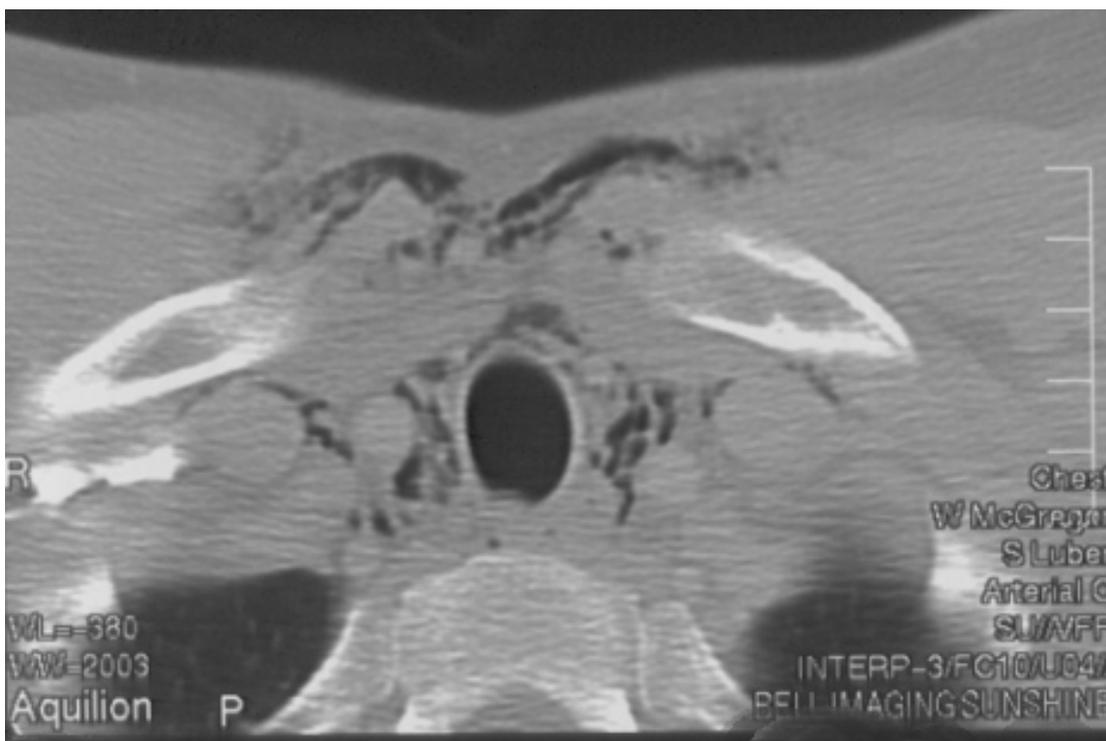


Question 6

1



2



Question 6 continued

3



## Question 7

Arterial blood gas and serum biochemical results.

			Reference Range
FIO <sub>2</sub>	0.5		
pH	7.62		(7.35-7.45)
pCO <sub>2</sub>	28.5	mmHg	(35-45)
pO <sub>2</sub>	234	mmHg	(80-95)
Bicarbonate	30.0	mmol/L	(22-28)
Base excess	8.3		(-3 - +3)
O <sub>2</sub> saturation	99.8	%	(> 95)
Lactate	1.1	mmol/L	(< 1.3)
Na <sup>+</sup>	131	mmol/L	(134-146)
K <sup>+</sup>	2.0	mmol/L	(3.4-5)
Cl <sup>-</sup>	90	mmol/L	(98-106)
Glucose	12.7	mmol/L	(3.5-5.5)

**Question 9**

