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**University Hospital, Geelong  
Emergency Medicine  
Trial Fellowship Exam  
Short Answer Questions (SAQ)  
Week 28**

**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 26 year-old man is brought to the emergency department by ambulance after a stated deliberate self-poisoning. He was agitated at the scene. He required significant police presence and force to transport to hospital.

*En route* to ED, he suffered a brief seizure which self-terminated.

- a. Other than methamphetamine, list five (5) LIKELY deliberate ingestions that may be involved (each to be from a different drug classification). (5 marks)

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

**Question 1 (continued)**

The patient remains handcuffed and agitated.  
His vital signs are:

BP	200/110	mmHg
HR	140	/min
RR	22	/min
Temp	38.1	°C
SpO2	98%	RA
GCS	14 (V4)	

**An arterial blood gas is taken on room air- see props booklet page 1.**

- b. Provide one (1) calculation to help you to interpret these results. (1 mark )

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

\_\_\_\_\_

- c. Using the scenario and the derived values, define the primary acid/base abnormality/s. (2 marks)

\_\_\_\_\_

\_\_\_\_\_

- d. Using the scenario and the derived values, define the secondary acid/base abnormality/s. (2 marks)

\_\_\_\_\_

\_\_\_\_\_

**Question 1 (continued)**

The patient is sedated and has 5 point restraint employed. A friend has presented and confirms that the patient self-administered a large dose of intravenous metamphetamine. His serum CK is 80,000. He develops a broad complex bradycardia with a heart rate of 30. His BP is now 70 systolic.

e. State your interpretation of this clinical state. Include five (5) points in your answer. (5 marks)

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

f. List thee (3) specific treatments that you would institute in the next 15 minutes. (3 marks)

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

**Question 2 (18 marks)**

You have just assessed a patient for whom you suspect subarachnoid haemorrhage as a possible diagnosis.

- a. List the six (6) requirements for the correct application of the Ottawa Subarachnoid haemorrhage rule. (6 marks)

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

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

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

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

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

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

**Question 2 (continued)**

b. List three (3) exclusion criteria for the application of the Ottawa Subarachnoid haemorrhage rule. (3 marks)

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

c. With regard to the Ottawa Subarachnoid haemorrhage rule, list four (4) high risk variables that suggest investigation is required. (4 marks)

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

**Question 2 (continued)**

d. Under what circumstances (if any) can a negative CT Brain be used to exclude Subarachnoid Haemorrhage? List five (5) points in your answer. (5 marks)

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

**Question 3 (12 marks)**

A 26 year-old man is brought to your Emergency department after a fall from a pushbike. After full assessment he appears to have a closed, isolated left forearm injury.

**Xrays from of his left forearm are taken- refer to the props booklet page 2.**

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

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

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

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

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

b. List five (4) examination features that would be consistent with compartment syndrome. (4 marks)

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

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

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

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



**Question 3 (continued)**

You diagnose compartment syndrome of his forearm.

c. List four (4) steps in your management of this condition. (4 marks)

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

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

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

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

**Question 4 (12 marks)**

- a. List four (4) indications for the insertion of central venous line insertion in the Emergency Department. (4 marks)

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

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

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

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

**Question 4 (continued)**

- b. List four (4) anatomical options for vascular access sites for vasopressor administration. For each site, state one (1) clinical reason to choose this site. (8 marks)

	<b>Site (4 marks)</b>	<b>Reason to choose this site (4 marks)</b>
1.		
2.		
3.		
4.		

**Question 5 (12 marks)**

A 64 year-old man presents to your Emergency Department with chest pain.

**Serial ECGs are taken- ECG 1 is taken on arrival with pain, ECG 2 is a pain free ECG- See props booklet page 3.**

a. State five (5) points of significance of the abnormal findings in these ECGs. (5 marks)

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

**Question 5 (continued)**

b. State the seven (7) diagnostic features of this condition. (7 marks)

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

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

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

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

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

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

7. \_\_\_\_\_

**Question 6 (12 marks)**

A 42 year old woman presents following a deliberate suicide attempt using carbon monoxide as a sole agent.

- a. List three (3) clinical features of carbon monoxide toxicity that you may observe in this patient. (3 marks)

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

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

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

- b. List three (3) possible indications for the use of hyperbaric oxygen for this patient. (3 marks)

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

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

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

**Question 6 (continued)**

c. State the major finding from the “Alfred Hyperbaric Oxygen study”. (1 mark)

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d. State two (2) criticisms of the “Alfred Hyperbaric Oxygen study” (2 marks).

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

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

e. State the major finding from the “Salt Lake City Hyperbaric Oxygen study”. (1 mark)

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f. State two (2) criticisms of the “Salt Lake City Hyperbaric Study”. (2 marks)

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

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

**Question 7 (12 marks)**

A 50 year old man presents to your emergency department complaining of a red, hot, swollen, painful left knee. There is no history of trauma. He is systemically well. He has no significant past history and takes no medications.

a. List five (5) LIKELY differential diagnoses for this presentation. (5 marks)

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

b. State two (2) reasons why you would perform arthrocentesis of this man's knee. Provide one (2) justification for each reason. (4 marks).

	<b>Reason to perform arthrocentesis (2 marks)</b>	<b>Justification (2 marks)</b>
1.		
2.		



**Question 7 (continued)**

- c. List three (3) contraindications to performing arthrocentesis of this man's knee joint.  
(3 marks)

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

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

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

### Question 8 (12 marks)

A 62 year old woman with a history of atrial fibrillation and hypertension presents with acute shortness of breath.

Her observations are:

BP	65/34	mmHg
HR	140	/min
Temp	36	°C
SaO2	not recordable	

**A bedside ultrasound of the heart is taken- a static image is shown - refer to the props booklet page 4.**

- a. List three (3) abnormal findings in this ultrasound in the setting of this scenario. (3 marks)

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

- b. List five (5) LIKELY causes for this problem for this patient. (5 marks)

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

**Question 8 (continued)**

c. List four (4) KEY steps in the management of this condition in this patient in the next 10 minutes. (4 marks)

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

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

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

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

**Question 9 (12 marks)**

An 84 year old woman presents with a new onset left hemiparesis.

a. State the two (2) therapeutic options that utilise interventional radiology.( 2 marks)

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

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

b. List three (3) possible indications for the use of interventional radiology for this patient. (3 marks)

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

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

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

**Question 9 (continued)**

The patient undergoes thrombolysis. Standard consent procedures are followed. Shortly after thrombolysis is commenced, the patient suffers a haemorrhagic stroke that is confirmed on CT.

c. List four (4) options for the reversal of thrombolysis. (4 marks)

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

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

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

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

d. List three (3) considerations/ factors that may lead to a decision to not reverse thrombolysis in this case. (3 marks)

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

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

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

University Hospital, Geelong- Fellowship Exam Short Answer Questions  
Week 28

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**PROP BOOKLET**

**Question 1**

<b>Arterial blood gases on room air</b>		<b>Reference range</b>
<b>pH</b>	<b>7.25 mmHg</b>	<b>(7.35-7.45)</b>
<b>pCO<sub>2</sub></b>	<b>23 mmHg</b>	<b>(35-45)</b>
<b>pO<sub>2</sub></b>	<b>99 mmHg</b>	<b>(75-100)</b>
<b>HCO<sub>3</sub><sup>-</sup></b>	<b>10 mmol/l</b>	<b>(22.0-33.0)</b>
<b>Lactate</b>	<b>5 mmol/l</b>	<b>(0.7-2.5)</b>
<b>Glucose</b>	<b>10 mmol/l</b>	<b>(3.0-7.8)</b>
<b>Base Excess</b>	<b>-16 mmol/l</b>	<b>(-3-+3)</b>



**Question 3**

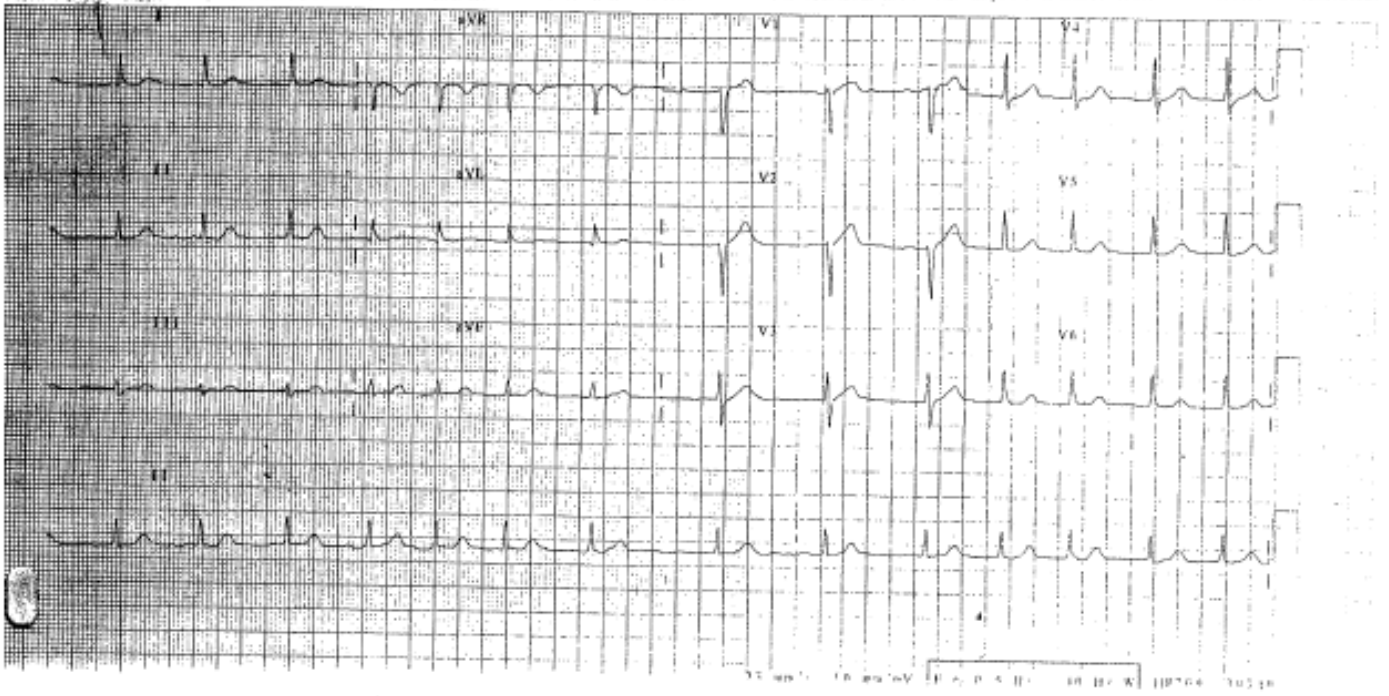
**Xray 1**

**Xray 2**

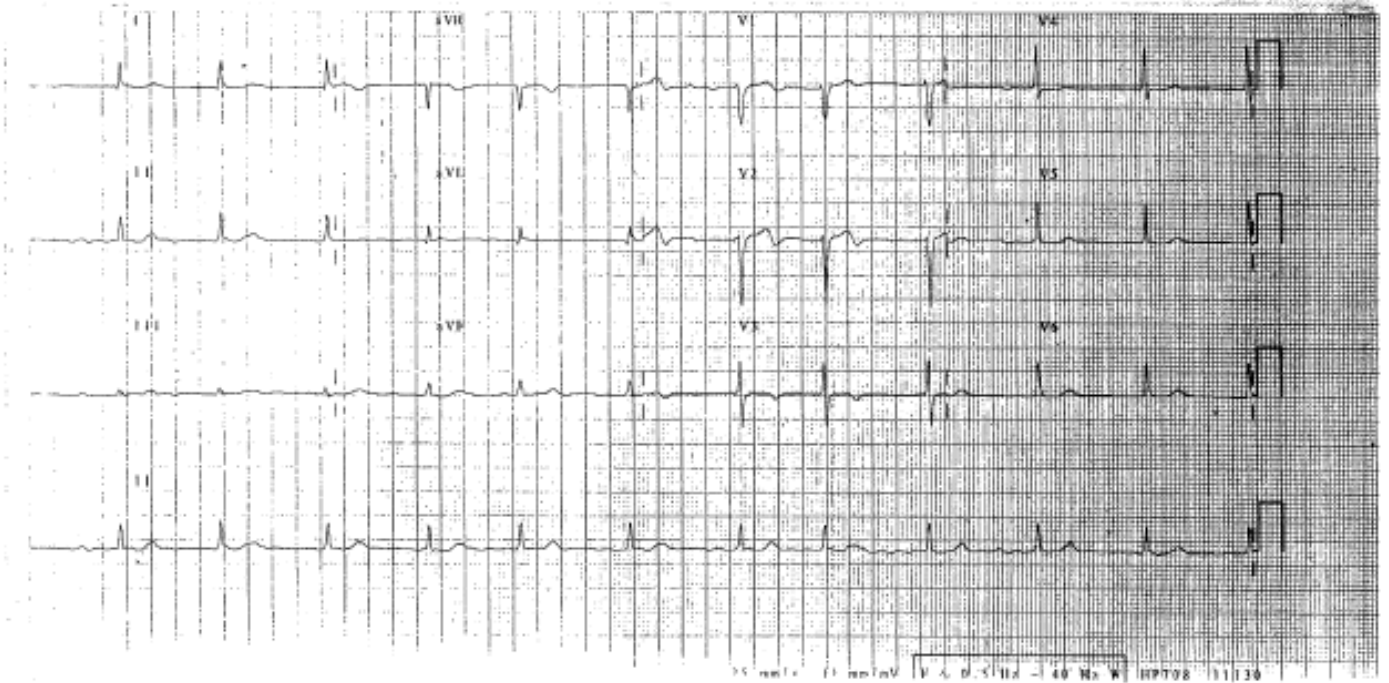


### Question 5

**ECG 1- with pain**



**ECG 2- pain free**



**Question 8**

