

ID NUMBER:

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

Week 10

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 25 year old man presents following a diving expedition.

- a. List four (4) features on history that would support the diagnosis of decompression illness. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 1 (continued)

b. List four (4) features on examination that would support the diagnosis of decompression illness. (4 marks)

1. _____

2. _____

3. _____

4. _____

c. What is the role of investigations in establishing the diagnosis of decompression illness? State two (2) points in your answer. (2 marks)

1. _____

2. _____

Question 1 (continued)

- d. State your threshold for consultation with a Hyperbaric Oxygen facility in the setting of diving. (1 mark)

- e. List three (3) justifications for your statement of threshold for consultation with a Hyperbaric Oxygen facility in the setting of diving. (3 mark)

1. _____

2. _____

3. _____

- f. List four (4) theoretic beneficial effects for Hyperbaric oxygen therapy in Decompression illness. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 2 (12 marks)

A 29 year old man presents following a high speed motor bike collision.

His X-ray including a retrograde cystogram is taken- refer to the props booklet- page 1.

a. State four (4) abnormal findings in this X-ray. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 2 (continued)

b. State four (4) pros for the use of a FAST scan in this patient. (4 marks)

1. _____

2. _____

3. _____

4. _____

c. State four (4) cons for the use of a FAST scan in this patient. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 3 (12 marks)

- a. State three (3) indications for the utilisation of Non-invasive Ventilation that are supported by high level evidence. (3 marks)

1. _____

2. _____

3. _____

- b. State three (3) indications for the utilisation of Non-invasive Ventilation that are supported by low level evidence only. (3 marks)

1. _____

2. _____

3. _____

Question 3 (continued)

c. List four (4) physiological benefits of Bi-level Positive Airway Pressure support (BiPAP) in COPD. (4 marks)

1. _____

2. _____

3. _____

4. _____

d. List two (2) patient factors that must be met to allow the initiation BiPAP. (2 marks)

1. _____

2. _____

Question 4 (12 marks)

A 7 year old boy has had lesions on his legs for the past 7 days. His 4 year old sister has the same skin eruptions.

A photo of his lower limb is taken- refer to the props booklet- page 2.

- a. State the most likely diagnosis. (1 mark)

- b. State three (3) features of this presentation that support this diagnosis. (3 marks)

1. _____

2. _____

3. _____

Question 4 (continued)

- c. List four (4) steps in the treatment of this patient. State one (1) justification for each choice. (8 marks)

	Treatment step (4 marks)	Justification (4 marks)
1.		
2.		
3.		
4.		

Question 5 (12 marks)

A 64 year man presents to your tertiary hospital, emergency department with 1 hour of chest pain and shortness of breath. Two large bore IV access have been obtained.

An ECG is taken on arrival- refer to the props booklet- page 3

a. State five (5) abnormal findings in this ECG. (5 marks)

4. _____

5. _____

6. _____

7. _____

8. _____

b. What is the significance of the findings in this ECG for this patient? Provide three (3) statements. (3 marks)

1. _____

2. _____

3. _____

Question 5 (continued)

Two large bore IV access have been obtained. Continuous, full, non invasive monitoring is commenced.

c. List four (4) steps in the treatment for this patient over the next 15 minutes. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 6 (12 marks)

A 29 year old man presents with fever and acute ankle and wrist pain with no history of trauma.

An aspiration of his ankle joint is performed- refer to the props booklet page 4.

a. List four (4) likely differential diagnoses for these results. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 6 (continued)

- b. List four (4) further investigations that you would perform in the Emergency department. State one (1) justification for each choice. (8 marks)

	Investigation (4 marks)	Justification (4 marks)
1.		
2.		
3.		
4.		

Question 7 (12 marks)

A 7 year old boy presents to your emergency department after sustaining an eye injury at school 2 hours prior.

A photo of the boy is taken- refer to the props booklet- page 5.

- a. State the most concerning abnormal feature shown in this photograph. (1 mark)

- b. List four (4) possible complications of this injury. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 7 (continued)

c. List five (5) medications that may be used for this patient. (5 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

d. State the expected prognosis for this patients' injury, assuming the condition does not deteriorate. (1 mark)

e. State one (1) justification for this choice of prognosis. (1 mark)

Question 8 (8 marks)

A 2 year old boy is brought to your emergency department by his grandparents, having found him unresponsive in their home. He has no significant past medical history.

A venous blood gas taken on arrival- refer to the props booklet- page 6.

- a. Provide two (2) calculations to help you to interpret these results.(2 marks)

Derived value 1: _____

Derived value 2: _____

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

Question 8 (continued)

- c. Using the scenario and the derived values, define the secondary acid/base abnormality/s. (1 mark)

- d. Provide a unifying explanation for these results. (3 marks)

Question 9 (18 marks)

- a. List five (5) benefits of a co-located “Short Stay Unit” associated with an emergency department. (5 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

- b. List four (4) limitations of a co-located “Short Stay Unit” associated with an emergency department. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 9 (continued)

c. List five (5) predictors of admission failure for a Short Stay patient. (5 marks)

1. _____
2. _____
3. _____
4. _____
5. _____

d. List four (4) examples of suitable conditions/problems to admit to a Paediatric Short Stay Unit. (4 marks)

1. _____
2. _____
3. _____
4. _____

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PROP BOOKLET

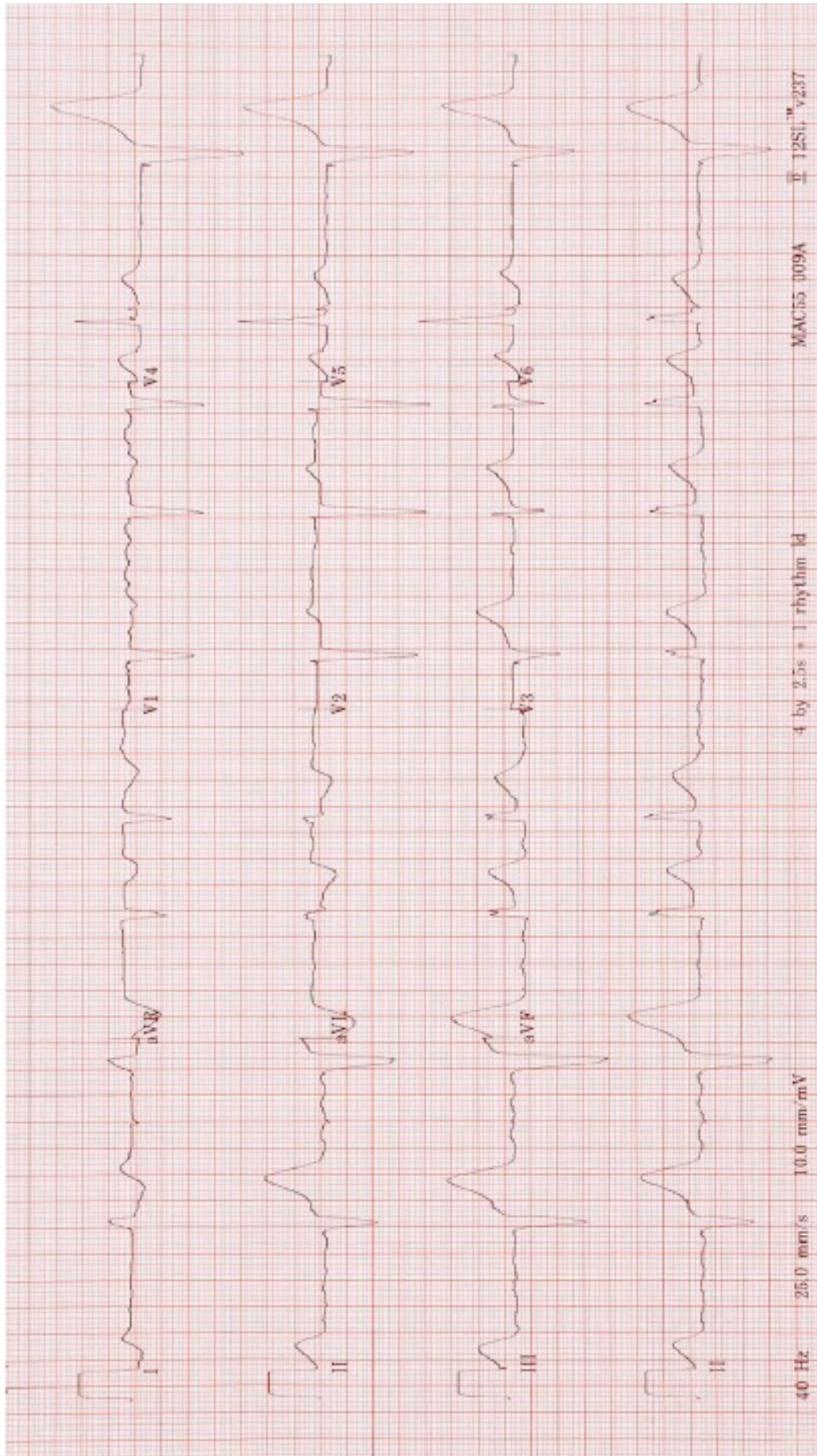
Question 2



Question 4



Question 5



Question 6

Joint fluid results

Appearance **Cloudy**

Microscopy **WCC 50,000 (Mainly neutrophils)**

Gram stain **No bacteria seen**

Crystals **None seen**

Question 7



Question 8

Venous blood gas			Reference Range
pH	7.1		7.35-7.45
pO ₂	50	mmHg	
pCO ₂	37	mmHg	40-52
HCO ₃ ⁻	11	mmol/L	24-32
Lactate	8.8	mmol/L	0.5-2.0
Na ⁺	143	mmol/L	135-145
K ⁺	3.8	mmol/L	3.5-4.8
Cl ⁻	110	mmol/L	95-110
Glucose	1.8	mmol/L	3.0-6.0