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**University Hospital, Geelong  
Emergency Medicine  
Trial Fellowship Exam  
Short Answer Questions (SAQ)  
Week 9**

**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 29 year old man is involved in high speed MCA. On primary and secondary survey his injuries appear to be restricted to the thorax and abdomen.

**A Chest X-ray is taken on arrival- refer to the props booklet- - page 1.**

a. State three (3) abnormal findings shown in this Chest X-ray. (3 marks)

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

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

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

His blood pressure on arrival is 70/30. He has received no pre-hospital treatment.

b. State three (3) LIKELY causes for his low blood pressure. (3 marks)

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

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

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

**Question 1 (continued)**

- c. State three (3) key principles for the application of massive transfusion in general. (3 marks)

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

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

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

### Question 1 (continued)

- d. Complete this table, stating the aims for these parameters in massive transfusion. (9 marks)

<b>Parameter</b>	<b>Aim (9 marks)</b>
<b>Temperature</b> (1 mark)	
<b>pH</b> (1 mark)	
<b>Base excess</b> (1 mark)	
<b>Lactate</b> (1 mark)	
<b>Ionised calcium</b> (1 mark)	
<b>Haemoglobin</b> (1 mark)	
<b>Platelets</b> (1 mark)	
<b>PT/APPT</b> (1 mark)	
<b>Fibrinogen</b> (1 mark)	

**Question 2 (18 marks)**

A 25 year old requires intubation following a drug overdose.

- a. Demonstrate your failed intubation algorithm. (18 marks)

**Question 3 (12 marks)**

A 23 year old man presents with a generalised tonic, clonic seizure.

- a. Define status epilepticus. (2 marks)

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- b. Other than Idiopathic epilepsy/ pre-existing seizure disorder, list four (4) MOST LIKELY causes for his seizure. (4 marks)

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

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

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

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

### Question 3 (continued)

You have IV access.

- c. Assuming the seizure continues, despite your treatment, list the agents and dose that you would administer at the specific time frames stated in the table below. (6 marks)

<b>Time since onset of seizure</b>	<b>Agents to be administered (include doses) (6 marks)</b>
<b>0 min (2 marks)</b>	
<b>5 min (1 mark)</b>	
<b>10 min (2 marks)</b>	
<b>20 minute (1 mark)</b>	

**Question 4 (12 marks)**

A 2 year old boy presents with suspected Kawasaki disease.

a. List the six (6) criteria for the diagnosis of Kawasaki disease. (6 marks)

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

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

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

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

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

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



**Question 4 (continued)**

- b. List four (4) blood tests that support the diagnosis of Kawasaki syndrome. State the expected abnormality. (4 marks)

	<b>Blood test</b>	<b>Expected abnormality</b>
1.		
2.		
3.		
4.		

- c. List two (2) specific treatments recommended in the treatment of a patient with suspected Kawasaki syndrome. (2 marks)

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

**Question 5 (12 marks)**

A 54 year old man presents with 1 hour of central chest pain.

**An ECG is taken on arrival, with 3 additional right-sided praecordial leads- refer to the props booklet- page 2.**

a. State three (3) abnormalities shown on this ECG. (3 marks)

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

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

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

b. State three (3) SIGNIFICANT implications of these findings. (3 marks)

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

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

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

### Question 5 (continued)

Prior to being given any of medication, his blood pressure is noted to be 70/30 mmHg with the same rate and rhythm as shown in the ECG.

- c. Assuming that the blood pressure does not improve, list three (3) specific treatments for his blood pressure. List one (1) justification for each choice. (6 marks)

	<b>Specific treatment (3 marks)</b>	<b>Justification (3 marks)</b>
1.		
2.		
3.		

**Question 6 (12 marks)**

A 4 year old boy presents to the emergency department 1 hour after falling from a playground slide.

On examination:

GCS 12 (E3, V3, M6)

**A CT brain in taken- refer to the props booklet- page 3.**

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

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

**Question 6 (continued)**

The nearest Neurosurgical facility is 20 minutes away by road ambulance.

b. State four (4) pros for endotracheal intubation prior to transfer. (4 marks)

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

c. State four (4) cons for endotracheal intubation prior to transfer. (4 marks)

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

**Question 7 (12 marks)**

A 35 year old man presents following stated Gamma-hydroxybutyric acid (GHB) use.

a. List four (4) expected clinical manifestations of GHB toxicity. (4 marks)

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

Prior to IV access, the patient becomes combative and states his intention to leave.

b. List four (4) KEY principles in the process of the application of physical restraint. (4 marks)

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

**Question 7 (continued)**

The patient is adequately physically restrained. You have not achieved IV access. The patient will require chemical sedation for agitation.

- c. State four (4) KEY steps in your approach to chemical sedation of this patient. (4 marks)

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

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

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

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

**Question 8 (12 marks)**

a. List four (4) ultrasound features of a normal appendix. (4 marks)

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

b. List four (4) ultrasound features of appendiceal inflammation. (4 marks)

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



**Question 8 (continued)**

c. State two (2) KEY pros of CT abdomen in the diagnostic process of suspected appendicitis. (2 marks)

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

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

d. State two (2) KEY cons of CT abdomen in the diagnostic process of suspected appendicitis. (2 marks)

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

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

**Question 9 (12 marks)**

A 77 year old man presents to your emergency department feeling generally unwell for several days.

His observations are:

HR	36	bpm
BP	120/80	mmHg supine

**Blood test are taken soon after arrival- refer to the props booklet- page 4**

- a. List four (4) calculations to help you to interpret these results. (4 marks)

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

\_\_\_\_\_

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

\_\_\_\_\_

Derived value 3: \_\_\_\_\_

\_\_\_\_\_

Derived value 4: \_\_\_\_\_

\_\_\_\_\_

**Question 9 (continued)**

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

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

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- d. List one (1) LIKELY unifying explanation for these results. (1 mark)

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- e. List two (2) KEY treatments that you would institute in the emergency Department in the first 1 hour. Provide one (1) justification for each choice. (4 marks)

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

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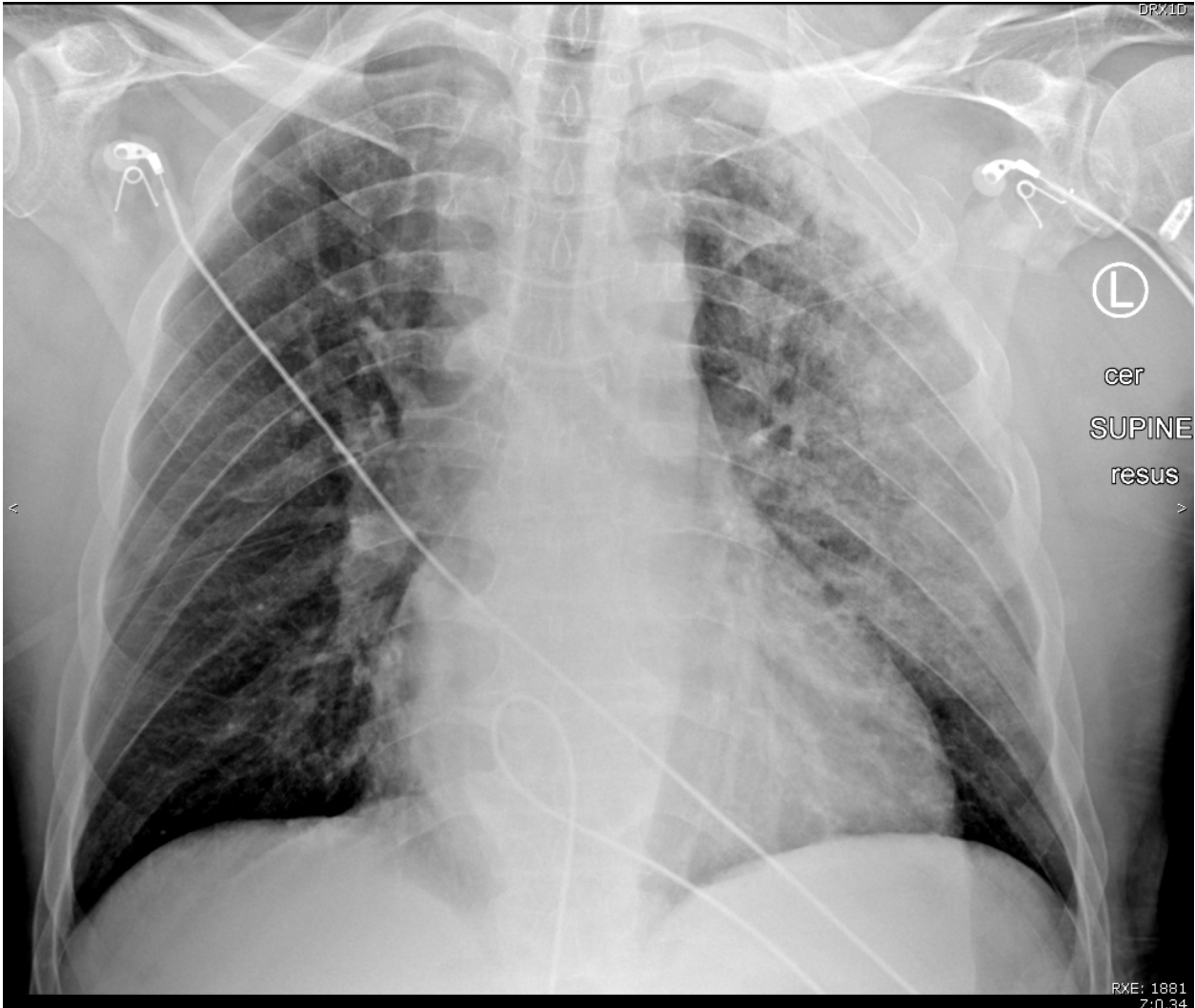
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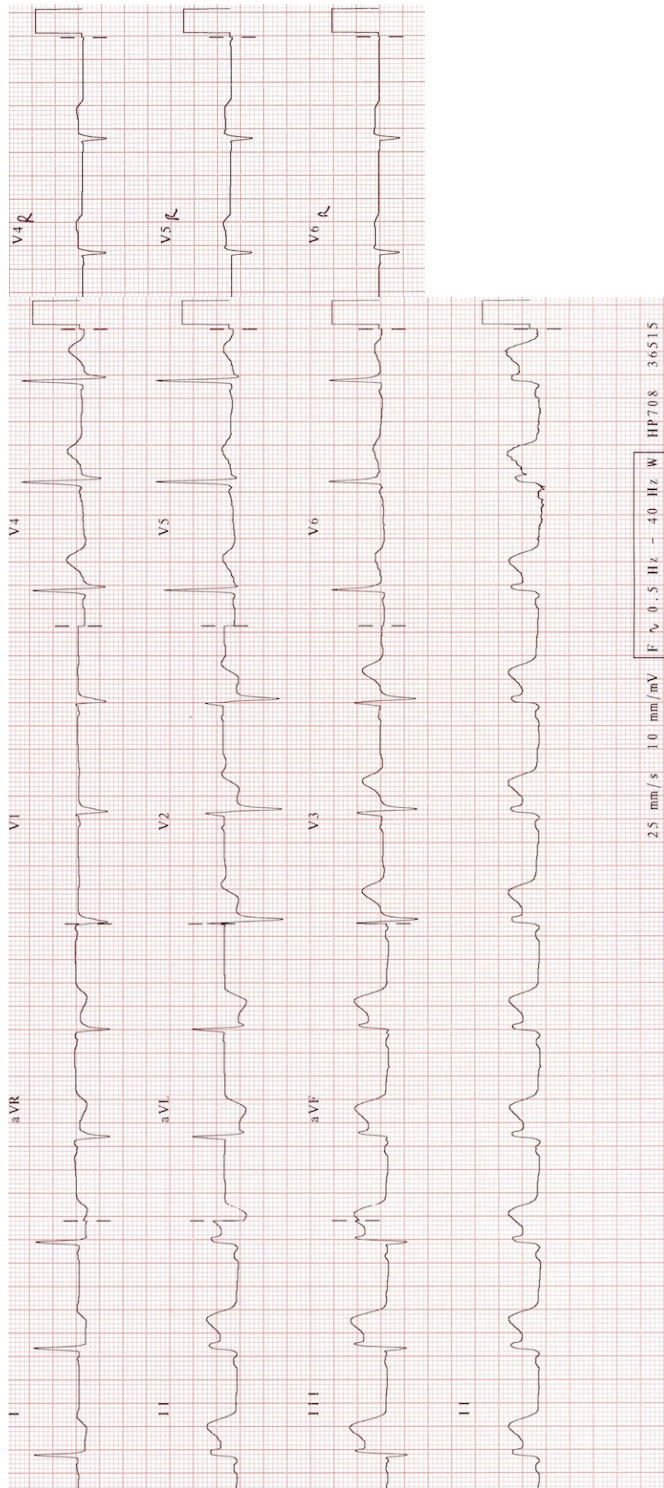
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Week 9

**PROP BOOKLET**

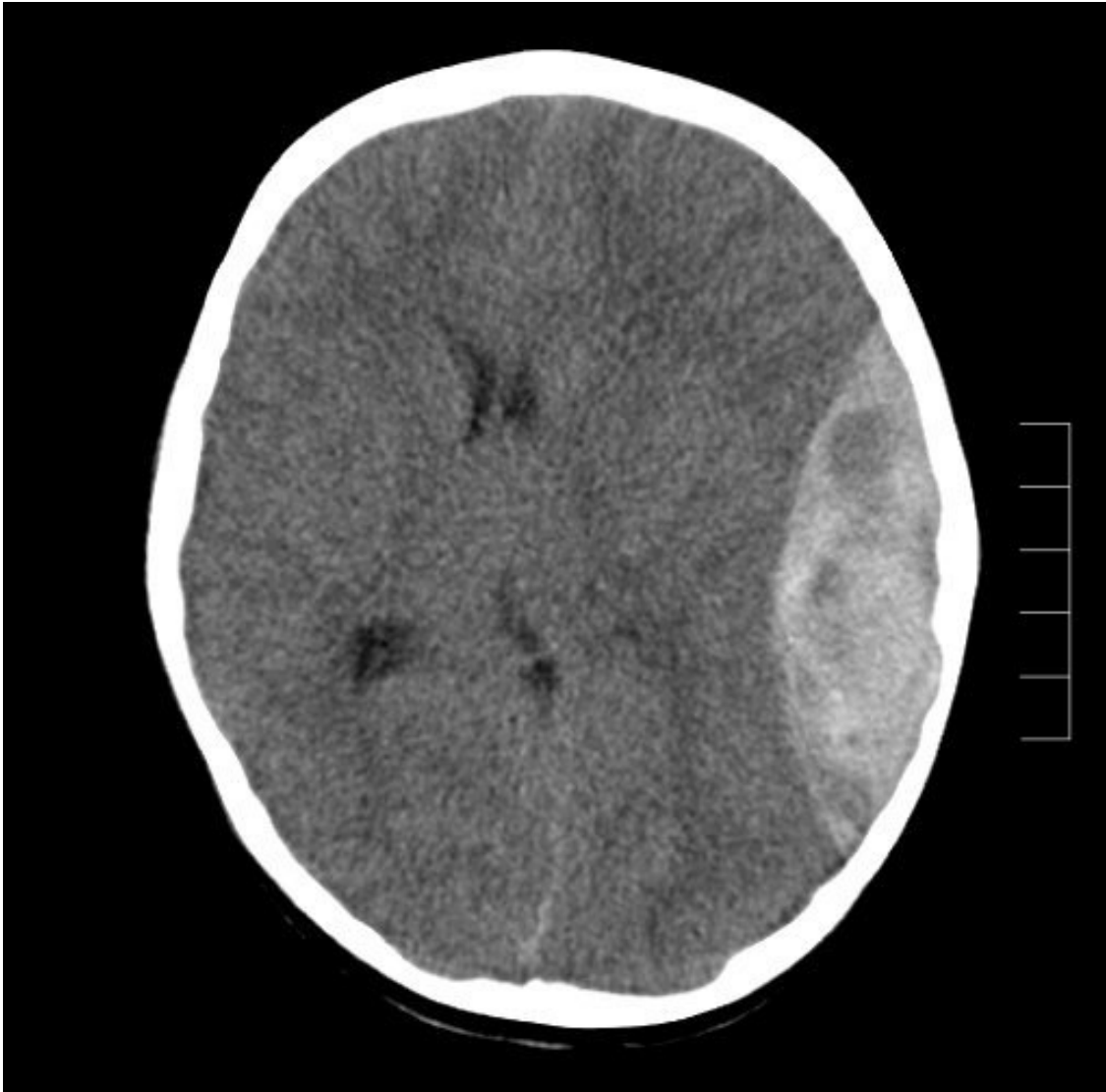
**Question 1**



Question 5



**Question 6**





## Question 9

			Reference Range
F <sub>i</sub> O <sub>2</sub>	0.3		
pH	7.19		(7.35-7.45)
pCO <sub>2</sub>	30	mmHg	(35-45)
pO <sub>2</sub>	119	mmHg	(80-95)
Bicarbonate	14	mmol/L	(22-28)
Base excess	-15		(-3 - +3)
O <sub>2</sub> saturation	97	%	(> 95)
Na <sup>+</sup>	132	mmol/L	(134-146)
K <sup>+</sup>	6.9	mmol/L	(3.4-5)
Cl <sup>-</sup>	98	mmol/L	(98-106)
Urea	49.4	mmol/L	(3-8)
Creatinine	1.05	mmol/L	(0.06 – 0.12)
Glucose	6.1	mmol/L	(3.5-5.5)
Digoxin	5.9	nmol/L	(0.6 – 1)