

Candidate name: \_\_\_\_\_

~~Department of~~  
~~Emergency Medicine~~

~~Princess Alexandra Hospital~~

**FELLOWSHIP TRIAL EXAMINATION**  
**2017.2**

**WRITTEN EXAMINATION**

**SHORT ANSWER QUESTIONS**

EXAMINATION TIME: 3 HOURS

**DIRECTIONS TO CANDIDATES**

1. The booklet is divided in to three parts
  - Each part is composed of 9 questions
2. Each mark is of equal weight
3. Write your name on the front page of each question paper
4. Write your initials on each subsequent page of the question paper
5. Answer each question in the space provided
6. Cross out any errors completely
7. Do not begin the exam until instructed to do so
8. No examination papers or materials to leave the room

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## **PAH 2017.2 trial SAQ paper**

### **PART 1**

**Questions 1 – 9**

**1 hour**

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**Q1**

A 65 year old man has presented to hospital with shortness of breath.

A chest x-ray is provided in the **PROPS BOOKLET**.

1. State the main pathology demonstrated on the chest x-ray. (1 mark)

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2. List 3 radiological abnormalities to support your diagnosis. (3 marks)

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3. List 3 differential diagnoses for this problem. (3 marks)

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4. List and justify 5 further investigations you might perform to establish the diagnosis.  
(5 marks)

Investigation	Justification

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**Q2**

A 33 year old woman has presented to the ED with a severe headache.

- 1. List 4 features of your history that would support the diagnosis of migraine. (4 marks)**

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You have assessed the patient to be suffering from a migraine.

- 2. List 5 drugs, each from a different class, that can be used as first line treatment for migraine. Include doses. (5 marks)**

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- 3. List 3 drugs that can be used for prophylaxis in recurrent migraine. (3 marks)**

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**Q3**

A 45 year old man has been transferred to your ED after a scuba diving trip. He complained of feeling unwell after ascending from a deep dive.

You are worried he might have decompression sickness.

- 1. List 5 clinical features of decompression sickness. (5 marks)**

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- 2. List 5 other diving related pathologies that might present shortly after rapid ascent. (5 marks)**

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After a full assessment, you have decided that the patient has significant decompression sickness.

His vital signs are:

GCS	14	E4 V4 M6
Pulse	105	/min
BP	110/65	mmHg
O2 sats	93%	room air

**3. List 3 main features of your management. (3 marks)**

- 1) \_\_\_\_\_  
\_\_\_\_\_
- 2) \_\_\_\_\_  
\_\_\_\_\_
- 3) \_\_\_\_\_  
\_\_\_\_\_

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**Q4 (9 min)**

A 78 year old woman has presented to the ED after a 3 day history of lethargy. She has been febrile and has complained of dysuria and right flank pain.

Her past medical history includes type 2 diabetes mellitus, congestive cardiac failure and hypertension.

Her blood results are given in the **PROPS BOOKLET**.

1. Give explanations for the following abnormalities. Include formulae where asked:

**HCO<sub>3</sub> 6 (3 marks)**

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Formula: \_\_\_\_\_

**Glucose 66.6 (1 mark)**

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Na 119 (2 marks)

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Formula: \_\_\_\_\_

K 8.4 (1 mark)

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Urea 15.7 and creatinine 298 (2 marks)

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Formula: \_\_\_\_\_

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On examination, the patient has the following vital signs:

GCS	13	E3 V4 M6
Pulse	120	/min
BP	95/55	mmHg
Temp	38.9	degrees
RR	20	/min
O2 sats	99%	room air

Her abdomen is soft with right renal angle tenderness.

ECG shows sinus tachycardia with tall peaked T waves and broad QRS complexes.

**2. State 6 steps in your management of this patient. (6 marks)**

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

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**Q5**

A 72 year old man has been brought to the ED after a syncopal episode.

His ECG is provided in the **PROPS BOOKLET**.

- 1. State your interpretation of the ECG. (2 marks)**

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- 2. List 3 features of the ECG that support your interpretation. (3 marks)**

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- 3. List 4 possible causes of this problem. (4 marks)**

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On examination, the patient looks pale and sweaty.

His vital signs are:

GCS	13	E3 V4 M6
BP	70/40	mmHg
RR	16	/min
O2 saturations	99%	room air

You have decided to initiate electrical pacing.

**4. State 5 steps in the successful implementation of electrical pacing. (5 marks)**

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

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**Q6 (9min)**

A 4 year old boy has been brought to your regional ED after being found at the bottom of a pool.

He was found to be in a state of Pulseless Electrical Activity on the arrival of the ambulance crew.

The ambulance crew were able to achieve return of spontaneous circulation. As part of the resuscitative effort, the child has been intubated.

- 1. List 5 features of your assessment that would be relevant in determining the likelihood of intact neurological survival. (5 marks)**

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- 2. List 5 important possible clinical complications of this presentation that may require active management. (5 marks)**

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The patient requires road transfer to your nearest tertiary centre.

**3. List 5 medications you might need during the transfer. (5 marks)**

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**4. List 5 essential pieces of equipment you will need for the transfer. (5 marks)**

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**Q7**

A 20 year old man has been punched to the face during an altercation at a bar. He is complaining of a painful, swollen face.

A coronal slice from his CT scan is provided in the **PROPS BOOKLET**.

**1. List 3 radiological abnormalities. (3 marks)**

1) \_\_\_\_\_

\_\_\_\_\_

2) \_\_\_\_\_

\_\_\_\_\_

3) \_\_\_\_\_

\_\_\_\_\_

You are about to examine the patient.

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2. Complete the table. Give 5 important components of your examination. Justify each component by listing a pathology you are aiming to identify/exclude. (10 marks)

Examination component	Pathology



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**Q8**

A 7 year old boy has injured his left arm after falling off a swing in the playground.

His x-rays (lateral and AP) are provided in the **PROPS BOOKLET**.

**1. List 3 radiological abnormalities on the x-ray. (3 marks)**

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**2. Classify the injury. (1 mark)**

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The child weighs 25 kilograms.

**3. List 3 different options for analgesia, including doses. (3 marks)**

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You intend to examine the patient's arm for neurological injury.

4. In the table below, list one sensory and motor function that you will assess for each of the nerves listed. (6 marks)

Nerve	Motor function	Sensory function
Radial nerve		
Median nerve		
Ulnar nerve		

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**Q9**

You are the consultant in charge of a tertiary ED on a Saturday evening. You have been notified by the ambulance of a bomb explosion at a local sporting stadium.

The ambulance officer in charge of the scene has rung to say that you will receive an unknown number of patients, possibly several hundred.

You have activated the hospital's disaster notification.

**1. List 8 important aspects of your preparation of the ED. (8 marks)**

- 1) \_\_\_\_\_  
\_\_\_\_\_
- 2) \_\_\_\_\_  
\_\_\_\_\_
- 3) \_\_\_\_\_  
\_\_\_\_\_
- 4) \_\_\_\_\_  
\_\_\_\_\_
- 5) \_\_\_\_\_  
\_\_\_\_\_
- 6) \_\_\_\_\_  
\_\_\_\_\_
- 7) \_\_\_\_\_  
\_\_\_\_\_
- 8) \_\_\_\_\_  
\_\_\_\_\_

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2. List 6 problems that you are likely to encounter in the next 24 hours. (6 marks)

1) \_\_\_\_\_

\_\_\_\_\_

2) \_\_\_\_\_

\_\_\_\_\_

3) \_\_\_\_\_

\_\_\_\_\_

4) \_\_\_\_\_

\_\_\_\_\_

5) \_\_\_\_\_

\_\_\_\_\_

6) \_\_\_\_\_

\_\_\_\_\_