

Candidate name: _____

PAH 2016.1 trial SAQ paper

PART 3

Questions 19 - 27

1 hour

Candidate initials: _____

SAQ 19 (double question)

A 26 year old woman presents with 3 days of lethargy and epigastric pain. She is 28 weeks pregnant.

Her vital signs are:

Temp	37.3	degrees
Heart Rate	110	beats per minute
Blood Pressure	140/90	mmHg
RR	26	breaths per minute
O ₂ Saturations	95%	room air

Her blood results demonstrate anaemia with thrombocytopaenia and elevated transaminases and bilirubin. You suspect that she may have HELLP Syndrome.

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1. List **three important differential diagnoses** for her presentation. (3 marks)

2. In addition to the findings provided, list six examination or investigative findings that would **support a diagnosis of HELLP syndrome or pre-eclampsia**. (6 marks)

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

(6) _____

Candidate initials: _____

3. List five **life-threatening complications of pre-eclampsia** and HELLP syndrome.

(5 marks)

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) _____

Whilst being assessed, the patient suffers a generalised tonic-clonic seizure

4. Describe your specific management of her seizure. Provide doses of any therapies used and state your clinical end-points

(4 marks)

Candidate initials: _____

The seizure is terminated effectively. The patient's blood pressure is now 180/110.

5. Describe your key management priorities for this patient. Be specific with any therapies administered. (8 marks)

Candidate initials: _____

SAQ 20

A 40 year old woman presents to ED complaining of weakness and difficulty walking. On initial assessment she is found to have loss of power in both legs, but normal upper limb and cranial nerve function.

1. List 3 key differential diagnoses you would consider for her presentation. For each differential, provide supportive historical and/or examination features. (9 marks)

Differential diagnosis	Supportive Historical and Examination Features

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You decide to perform a lumbar puncture as part of your workup.

2. Outline the **key aspects of consent** as they apply in this situation. (3 marks)

SAQ 21

Your registrar has called you to resus to help with a patient. An 18 year old male presented in diabetic ketoacidosis, complicated by a prolonged generalised seizure. He has been intubated for airway protection and is currently being sedated and mechanically ventilated, awaiting ICU review. His weight is 80kg.

A blood gas is provided in the **PROP BOOKLET**.

1. Complete the following table for calculations that can be made from the above blood gas. (10 marks)

Variable	Formula Used	Result	Clinical Implication in this case
Expected CO ₂			
A-a gradient			
Anion Gap			
Delta Ratio			
Corrected Sodium			

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Your registrar asks for guidance to address his respiratory status.

Currently the ventilator is set as follows:

Mode	SIMV-VC	
FiO ₂	1.0	
TV	400	mls
Resp Rate	12	breaths/min
PEEP	5	cm H ₂ O
PSupp	5	cm H ₂ O

You notice the patient is making some spontaneous respiratory efforts which are triggering the high pressure alarms.

2. Give your strategy **for improving this patient's ventilation**, stating your desired end-points. (5 marks)

SAQ 22

You are notified by the public health unit of an impending aircraft arrival from West Africa. A suspected outbreak of Ebola Virus Disease (EVD) amongst health care workers has led to a large scale air evacuation. Your hospital is set to be one of several who will accept arrivals from this flight. The flight is scheduled to arrive in the next few hours.

1. **List and justify the different stakeholders** you would engage in your strategy for managing the possible surge of EVD patients.

(5 marks)

Candidate initials: _____

2. List the key principles of managing patients with suspected Ebola Virus Disease in the Emergency Department.

(4 marks)

You are told that the plane has landed and 10 patients are en route to your hospital. Your department is currently full with many patients awaiting admission or ward bed allocation.

3. List four strategies you might use to **prepare your department** for these arrivals.

(4 marks)

(1) _____

(2) _____

(3) _____

(4) _____

Candidate initials: _____

SAQ 23

A 38 year old man presents with rapid palpitations for 30 mins. He feels lightheaded but denies any chest pain. ECG demonstrates a wide-complex tachycardia.

1. **List six ECG findings** that would support a diagnosis of Ventricular Tachycardia (VT)
(6 marks)

- (1) _____
- (2) _____
- (3) _____
- (4) _____
- (5) _____
- (6) _____

2. List four features you would seek on **history** that would support a diagnosis of VT
(4 marks)

- (1) _____
- (2) _____
- (3) _____
- (4) _____

Candidate initials: _____

You diagnose Ventricular Tachycardia and elect to cardiovert the patient electrically.

3. State four key steps you would undertake in electrically cardioverting this patient in ED. Be specific with any therapies used. (4 marks)

(1) _____

(2) _____

(3) _____

(4) _____

Candidate initials: _____

SAQ 24

An 18 year old girl is brought to ED after a collapse. She has a history of anorexia nervosa.

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

1. What is the **most important** abnormality shown on her ECG? (1 mark)

2. List one other associated abnormalities present on her ECG (1 mark)

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3. State four **key investigations** you would perform in the ED on this patient. Provide your rationale for each investigation. (8 marks)

Investigation	Rationale

You explain to the patient that she will need to be admitted for further treatment and to address her eating disorder. She tells you she is going to discharge against your advice. Her parents plead with you to keep her in hospital “for her own good”.

4. List the conditions would need to be present for you to be able to **detain and treat her against her expressed wishes?**

(4 marks)

(1) _____

(2) _____

(3) _____

(4) _____

SAQ 25

A 3 year old boy with normal developmental milestones is brought in by his mother, who tells you that he has stopped walking on his right leg for the last 24 hours.

On initial examination, the child appears unsettled and will not walk or bear weight on his right leg.

You are worried the child may have septic arthritis of the hip joint.

1. List five important alternate differential diagnoses. (5 marks)

2. List four investigations that may aid in confirming or excluding septic arthritis as the cause of this child's presentation. Provide rationale for each investigation.(8 marks)

Investigation	Rationale

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Your assessment indicates that septic arthritis is unlikely. The child is still not weight bearing but appears well and comfortable.

3. List five criteria that need to be met to **safely discharge this child**. (5 marks)

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

SAQ 26

A 50M presents with central chest pain radiating through to his back for 30 minutes. He is sweaty and pale and agitated. He has a background of hypertension for which he has not been treated

You are considering a diagnosis of a thoracic aortic dissection.

1. List three specific examination findings that would support a diagnosis of thoracic aortic dissection (3 marks)

(1) _____

(2) _____

(3) _____

2. For each of the following investigative modalities, indicate advantages and disadvantages **specific** to thoracic aortic dissection. (8 marks)

INVESTIGATIVE MODALITY	ADVANTAGE(S)	DISADVANTAGE(S)
CT Aortogram		
Trans Thoracic Echocardiogram		

Candidate initials: _____

The patient's blood pressure is 180/120 and pulse rate is 100/min (regular).

3. Detail your emergency department management of the patient's haemodynamic state. State your end points. (6 marks)

Candidate initials: _____

SAQ 27

Your registrar has come to see you for help with a patient. They are seeing a 2 year old boy, who was brought to ED by their parent after they fell off the playground equipment at the park, hitting their head.

1. List five **accepted clinical indications** for CT Brain imaging for this child.(5 marks)

(1) _____

(2) _____

(3) _____

(4) _____

(5) _____

Candidate initials: _____

The child appears well and interactive, with a forehead abrasion but no other injuries. You are told the child had one vomit after the fall, but is now tolerating fluids without intervention.

Despite your registrar's reassurances, the child's parent is demanding a CT scan.

2. Outline the key components of your response to this parent. (5 marks)
