
2019.2

**South Australia
&
Northern Territory
Trial SAQ Exam**

Booklet 2

SAQs 10 – 18

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SAQ 10 (18 marks)

A 30-year-old man presents with a skin infection to his left lower leg.

He has no past history other than swelling of his throat with penicillins.

He has a fever and is haemodynamically stable.

During the process of completing your assessment you become concerned about the possibility of necrotising fasciitis.

- a) Aside from fever, complete the following table for six (6) MOST RELEVANT features in his history and examination that would alert you to the possibility of necrotising fasciitis? **(6 marks)**

History features (3 marks)	Examination features (3 marks)

The patient becomes hypotensive.

He is moved to a resuscitation bay and an arterial line is inserted.

An arterial blood gas is taken from the arterial line and **is shown in the props booklet**.

b) Complete the table below in regard to explaining the key findings on the ABG. **(6 marks)**

	Finding	Likely Reason
pH		
PCO ₂		
Anion Gap		

- c) State the three (3) MOST IMPORTANT management priorities along with justified reason or detail. **(6 marks)**

Management Priority	Justification/detail

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SAQ 11 (12 marks)

A 32 year old woman who is 34/40 pregnant is being brought in by ambulance after a high speed motor vehicle accident.

- a) Complete the following table with four (4) possible obstetric injuries/complications and two (2) matching clinical or laboratory findings. **(12 marks)**

	Obstetric Injury/Complication	Two (2) Clinical/Laboratory Findings
1.		
2.		

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	Obstetric Injury/Complication	Two (2) Clinical/Laboratory Findings
3.		
4.		

SAQ 12 (13 marks)

A 64 year old man has been brought to your tertiary hospital Emergency Department with a history of syncope.

His observations are:

HR 110 /min

RR 28 /min

SaO₂ 93% RA

BP 105/70 mmHg

GCS 15/15

There are no arrhythmias, heart blocks or signs of Acute Coronary Syndrome on his ECG.

a) List five (5) ECG features that would suggest arrhythmia as a cause of his syncope. **(5 marks)**

1.

2.

3.

4.

5.

The patient deteriorates and his observations are now:

HR 125 /min (sinus rhythm)

RR 32 /min

SaO₂ 93% RA

BP 70/50 mmHg

GCS 13/15

BGL 6.2 mmol/L

- b) Complete the following table for causes of non-arrhythmic cardiogenic shock and provide specific management for each. **(8 marks)**

Cause	Management

SAQ 13 (12 marks)

A 45 year old man (weighing 70kg) is brought into the ED by the ambulance service after he was witnessed to have a generalised seizure. A total of 5mg of intramuscular midazolam was given pre-hospital. It was suspected that he had taken an overdose of his prescription medication.

- a) List four (4) prescription medications under each of the following drug categories, which could cause a seizure as a result of an overdose **(4 marks)**

Drug class	Example of drug which could cause seizure
Analgesics	
Antimicrobials	
Psychiatric medications	
Other medications	

- b) List three (3) immediate bedside tests you would do to investigate the cause of his seizure, and for each, state your rationale **(6 marks)**

	Bedside test	Rationale
1		
2		
3		

- c) The patient proceeds to have two (2) more seizures in the ED despite intravenous midazolam. List two (2) "second-line" agents (with appropriate dose) which could be used to terminate seizures in this situation **(2 marks)**.

1.

2.

SAQ 14 (13 marks)

A 42-year-old male has presented to your metropolitan Emergency Department with syncope. He is pale and tells you he rarely sees a doctor. He has chronic knee pain from a sporting injury.

A Complete Blood Examination (CBE) was performed and the result **is shown in the Prop booklet**.

a) What are the significant findings shown in the CBE? **(2 marks)**

1.

2.

b) What would be a likely diagnosis to consider in this patient? **(1 mark)**

The patient requires a blood transfusion of packed red cells.

In order to gain informed consent for the transfusion a number of important complications need to be discussed with this patient.

c) List five (5) potential complications of a packed red blood cell transfusion. **(5 marks)**

1.

2.

3.

4.

5.

The patient is receiving the prescribed blood transfusion. Nursing staff alert you to a sudden deterioration in the patient's condition. Observations reveal a temperature of 38 degrees and a pulse rate of 110; other observations are normal.

You suspect a transfusion reaction.

d) List five (5) immediate actions you would take in this situation. **(5 marks)**

1.

2.

3.

4.

5.

SAQ 15 (11 marks)

A 75 year old man is brought by ambulance to your rural ED. He has a history of stroke, and consequently lives in a high-level care nursing home. He has been sent to hospital as he has become agitated and pulled out his PEG (gastrostomy) tube.

- a) List two (2) factors that will determine whether you will attempt to re-site the tube, and provide a brief rationale for each. **(4 marks)**

Factor	Rationale

You decide to re-site the tube, however a replacement PEG tube is not available in the hospital and there is no specialist gastroenterology or surgical support on site.

- b) What is a suitable alternative? **(1 mark)**
-

After having difficulty during the process of re-siting the tube, you are concerned the tube may be malpositioned.

c) What would your next step be and justify? **(2 marks)**

d) Other than inadvertent removal, list four (4) other potential PEG complications that can result in patients presenting to the ED. **(4 marks)**

1.

2.

3.

4.

SAQ 16 (12 marks)

A 39 year old SCUBA diver presents to your Emergency Department with a rash to his torso after ascending from a dive on the Great Barrier Reef two hours ago.

See image in Props book.

a) State the two (2) most likely differential causes for the rash. **(2 marks)**

1.

2.

b) List six (6) risk factors for a SCUBA diver developing decompression illness. **(6 marks)**

1.

2.

3.

4.

5.

6.

The patient develops weakness in his legs and urinary retention. There are concerns that he has Spinal Decompression Illness and the decision is made to retrieve him to the nearest hyperbaric chamber, 300km away.

c) State two (2) advantages and two (2) disadvantages for using an Aeromedical Helicopter to retrieve this patient. **(4 marks)**

Advantage 1.

Advantage 2.

Disadvantage 1.

Disadvantage 2.

SAQ 17 (12 marks)

A 7 year old boy is brought by ambulance to your emergency department from a local primary school; they are accompanied by a teacher.

He has a widespread erythematous rash and difficulty breathing shortly after eating a sandwich from his friend's lunch box that contained peanut butter.

He has no known allergies.

His vital signs are:

HR 140 bpm

SaO₂ 90% on room air, with wheeze, no stridor

RR 42 bpm

BP 75/45 mmHg

GCS 15/15

a) What is the estimated weight for this patient? (Please include your formula) **(2 marks)**

The resuscitation team have moved him to a resuscitation bay and they have applied high-flow oxygen.

- b) What three (3) most important treatments would you prescribe for this patient? Complete the table below with treatments and details. **(6 marks)**

	Treatment	Details (dose, concentration, route)
1		
2		
3		

One of the child's parents has arrived and after a period of observation you decide they require referral to an inpatient team.

- c) List four (4) indications for referral for inpatient team admission. **(4 marks)**

1.

2.

3.

4.

SAQ 18 (12 marks)

A 2-year-old boy is brought to your emergency department by his mother. She is concerned that he has been vomiting and having diarrhoea for the last 3 days. He has been having 4–5 loose watery stools per day. His mother does not report any blood within the nappies.

His weight is 12 kg.

a) List five (5) indications for doing blood tests on a child with gastroenteritis. **(5 marks)**

1.

2.

3.

4.

5.

b) List four (4) clinical signs that indicate severe dehydration. **(4 marks)**

1.

2.

3.

4.

The child is assessed as having moderate dehydration (5%). You decide to proceed with oral rehydration.

c) Provide details of the rehydration regime you will use for this child. (3 marks)

1.

2.

3.
