

Candidate number _____

NALHN Booklet 1

Questions

SAQ 1 (18 marks)

A 67 year old male patient was brought into the ED by his family after he collapsed at home. His past medical history includes dialysis-dependent chronic renal failure (secondary to diabetic nephropathy), hypertension, ischaemic heart disease and congestive cardiac failure.

His initial vital signs in ED are as follows:

GCS	15	
BP	80/50	mmHg
P	80	bpm
RR	30	/min
SpO ₂	90%	on room air

- a. List four (4) specific point of care / bedside test which are indicated in this patient AND state your justifications (8 marks)

	Bedside tests (4 marks)	Justification (4 marks)
1		
2		
3		
4		

- b. An ECG is performed (**see prop booklet**). List three (3) diagnostic abnormalities in his ECG and state your unifying diagnosis (4 marks)

ECG abnormalities (3 marks)	
1	
2	
3	

Diagnosis (1 mark)	
-------------------------------	--

- c. In view of the ECG findings, list three (3) ways you would correct the abnormality suggested by this ECG AND the treatment principle/goal for each (6 marks)

	Correct by: (drug and dose OR method) (3 marks)	Treatment principle/goal (3 marks)
1		
2		
3		

SAQ 2 (18 marks)

A 70 year-old female with a known seizure disorder has self-presented to your rural ED at 2 am after brief <1min seizure (she lives several hours out of town with her husband).

Her past history also includes middle cerebral artery stroke with NO residual focal deficits, hypertension and hypercholesterolaemia.

Her seizure disorder is managed on levetiracetam and she has not had a seizure for 2 years. She had missed 7 days of her anticonvulsants while she was travelling interstate.

Her vital signs are:

HR	90	bpm
BP	130/70	mmHg
SpO2	97%	on room air
RR	18	/min
Temp	37.3	°C

She has isolated right shoulder pain without evidence of injury in other locations.

Her X-ray is included in the **props booklet**.

- a. Describe the findings on the X-Ray (2 marks)

- b. List your three (3) treatment priorities for this patient with BRIEF details of each (6 marks)

Management Priority (3 marks)	Details (3 marks)

- c. List three (3) important components of discharge planning for this patient with BRIEF details of each (6 marks)

Discharge plan (3 marks)	Details (3 marks)

Candidate number _____

Prior to commencing any treatment the patient asks whether there are any likely complications from the injury.

- d. List four (4) potential complications from this injury. **(4 marks)**

SAQ 3 (13 marks)

A 28 year old, 32 week pregnant, woman presents to your regional hospital 20 minutes after being bitten by a snake on her foot. She is very anxious about the safety of her baby.

- a. State four (4) clinical syndromes associated with envenomation indicating an Australian snake which causes each (8 marks)

Clinical Syndrome (4 marks)	Causative Snake (4 marks)

- b. State how the indication AND dose of antivenom are affected by this patient's pregnant status with explanation (2 marks)

Candidate number _____

You explain to the patient that you are going to organise transfer to a major hospital so she can continue to be managed. Upon hearing this she is quite distressed and requests that she stays at this small regional hospital.

- c. List the medical criteria that necessitate her transfer to the major hospital (3 marks)

SAQ 4 (12 marks)

A 13 year old girl presents to the emergency department with confusion and abdominal pain. She has a background of type 1 diabetes requiring insulin treatment.

She has had 3 days of vomiting and 2 days of diarrhoea prior to this presentation.

Her vital signs are:

Temp	37	°C
HR	124	bpm
BP	120/70	mmHg

Central capillary refill time 4 seconds

Her initial venous blood gas results on room air are:

pH	6.93	Na	124 mmol/L
pCO ₂	9 mmHg	K	6.2 mmol/L
pO ₂	44.9 mmHg	Cl	79 mmol/L
HCO ₃	2 mmol/L	Glc	43.5 mmol/L
BE	-25.5 mmol/L	Hb	162 g/L

- a. Quote four (4) appropriate formulae that assist the analysis the above blood results. You are NOT required to insert the appropriate values or calculate results. (4 marks)

- b. State four (4) important principles regarding your fluid and electrolyte treatment of this patient while in the emergency department AND give a justifying statement (which may include doses) for why it is an important principle (8 marks)

Principle 1	
Statement 1	
Principle 2	
Statement 2	
Principle 3	
Statement 3	
Principle 4	
Statement 4	

SAQ 5 (12 marks)

Parents have brought their 3 year old child into your emergency department concerned that he has inserted an uncooked kernel of popcorn into his right ear.

Your examination confirms the presence of this foreign body **(see photo in props booklet)**

The child is co-operative and well restrained by his parent.

- a. List four (4) potential instruments/methods of removal OF THIS FOREIGN BODY including a “pro” and a “con” for each. (12 marks)

1) _____

Pro _____

Con _____

2) _____

Pro _____

Con _____

Candidate number _____

3) _____

Pro _____

Con _____

4) _____

Pro _____

Con _____

SAQ 6 (11 marks)

A febrile 72 year-old lady is brought by ambulance to ED with an acute abdomen.

She is known to have end-stage renal disease (secondary to diabetes) that is managed with chronic ambulatory peritoneal dialysis (CAPD). She has no allergies and is MRSA positive.

You are concerned she has CAPD-associated peritonitis.

- a. List five (5) possible causes for this patient to have abdominal pain and fever EXCLUDING CAPD-associated peritonitis (5 marks)

- b. Complete the table below by stating findings specific to CAPD-associated peritonitis. (3 marks)

	Findings
History	
Examination	

The patient has an acute abdomen but is normotensive and responding normally.

- c. State your 3 most important pharmacological treatments for this lady. **(3 marks)**

SAQ 7 (14 marks)

You have been informed of the results of an audit which demonstrate an increase in IV-line infections in your emergency department. You have been asked to find solutions to this problem.

- a. Given the three (3) factors below, list two (2) examples of each that may contribute to an increase in IV line infections (6 marks)

	Examples
System factors	
Process factors	
Patient factors	

Candidate number _____

- a) List the key steps that can be used to prevent OR minimise these events occurring, with an example for each (8 marks)

Steps	Example

SAQ 8 (12 marks)

A 25 year old athlete is brought to your Emergency Department by a voluntary St Johns ambulance crew. He collapsed while competing in a marathon event and has only received basic first aid.

On arrival in the ED his vital signs are as follows:

GCS	11	(E3, V4, M4)
Temp	41.5	°C
HR	140	bpm
BP	85/40	mmHg
SpO2	98%	on room air

- a. List the three (3) MOST LIKELY differential diagnoses for this patient's presentation. (3marks)

- b. Outline the three (3) INITIAL treatments that you would commence WITH target end-points. (3 marks)

Blood tests are performed on the patient and some of the initial results are given below:

Hb	185	g/L	(115 - 165)
WCC	25	$\times 10^9/L$	(3.5 - 11)
Plt	40	$\times 10^9/L$	(150 - 450)
Na	146	mmol/L	(135 - 145)
K	5.7	mmol/L	(3.5 - 5)
Urea	22	mmol/L	(2 - 7)
Creatinine	410	$\mu\text{mol/L}$	(60 - 110)
CK	27,000	IU/L	(60 - 220)

- c. List the three (3) MOST IMPORTANT abnormalities AND explain their significance (3 marks)

- d. Following these investigation results state your MOST IMPORTANT treatment principle for your ongoing treatment principle for this patient (1 mark)

SAQ 9 (12 marks)

A 34 year male presents to the Emergency Department with a widespread blistering rash.

- a. EXCEPT for Stevens-Johnson Syndrome OR toxic epidermal necrolysis, give six (6) differential diagnoses in this patient (6 marks)

- b. Give four (4) causes of Stevens-Johnson Syndrome (4 marks)

Candidate number _____

c. What is Nikolsky's sign? (2 marks)

This space is intentionally blank