

Candidate name: _____

**SCHHS-METRO NORTH
MOCK FELLOWSHIP SAQ EXAM
2019.1**

BOOKLET TWO

QUESTIONS 10-18

Question 10 (18 marks)

A 26-year-old man presents to triage with a chest wound following an altercation at a local bar (see image in the Props Booklet; Figure 4).

He is immediately laid down on a trolley and transferred to the resuscitation bay where he arrests as the monitoring is being attached.

a) Describe your immediate management for this patient. (2 marks)

After your interventions, the patient achieves ROSC. Due to ongoing bleeding, you activate the hospital Massive Transfusion Protocol (MTP).

b). List two other indications apart from trauma for the in-hospital activation of the Massive Transfusion Protocol (MTP). (2marks)

c). Complete the following table for parameters to monitor during a massive transfusion, and their desired target (8 marks)

d). State the post resuscitation cares required. (6 marks)

Question 11 (18 marks)

A 58-year-old female is brought to your emergency department complaining of having been bitten on the hand by a brown-coloured snake three hours ago. The ambulance service has applied a pressure immobilisation bandage.

a). List the clinical assessment features that would suggest envenomation in this case. (4 marks)

Her initial coagulation profile is shown below.

GENERAL COAGULATION		Specimen: Blood	
INR	>10.0 C	Platelets	169
Prothrombin Time	>100 H		
APTT	>200 C		
Fib (derived)	< 0.4 C		
Fib (clottable)	< 0.4 C		
DDimer	>128.00 H		

b). Define the abnormality shown. (1 mark)

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The advice from the toxicologist is to perform a venom detection kit (VDK) test.

c). List three (3) options for sample acquisition and state the role of a VDK. (4 marks)

d). Complete the following table listing the absolute and relative indications for antivenom administration. (6 marks)

Absolute	Relative

e). List three other considerations regarding the administration of antivenom (3 marks)

Question 12 (12 marks)

A 2-month-old girl is brought in to ED by her very worried parents. They describe an episode just after feeding where she seemed to stop breathing and went floppy and blue around the lips. It lasted approximately 20 seconds and resolved after they picked the baby up and blew at her face. The baby cried and has been behaving normally since.

a). What is the clinical term used to describe this child's presentation? (1 mark)

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b). List 4 differential diagnoses for this presentation. (4 marks)

c). List 4 criteria that would stratify this event as low risk. (4 marks)

On completion of your history and assessment you are satisfied that this is a LOW RISK presentation.

d). List three (3) further investigation or management steps you will perform prior to discharge home. (3 marks)

Question 13 (12 marks)

You have just started working as a junior consultant on a temporary contract in a metropolitan emergency department, hoping that your contract will become permanent. You are helping in the resuscitation of a patient where the team leader in this resuscitation is one of your senior FACEM colleagues who has worked at this emergency department for over 20 years, is an ACEM examiner and is very well respected.

The patient is a 9-year-old male with Duchenne's muscular dystrophy who has pneumonia and is in respiratory failure. Your colleague has told the team that the decision has been made to intubate this patient. He asks the nurse to draw up ketamine and suxamethonium for the intubation.

a) What is your response to the choice of these drugs? (1 marks)

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b) How would you communicate this to your senior colleague? (2marks)

c) State two barriers to effective communication with your colleague in this situation? (2 marks)

d) List the next steps of your communication strategy in this situation should your senior colleague not respond favourably to your initial communication? (2 marks)

e) List 3 principles of harm minimisation. (3 marks)

f) What is the study of human factors? (2 marks)

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Question 14 (12 marks)

A 78-year-old woman presents to your tertiary hospital with nausea, vomiting, loose bowel motions and malaise. She has a background of atrial fibrillation, hypertension and type II diabetes. Her current medications include: Candesartan 16mg daily, apixaban 2.5mg bd, dapagliflozin 10mg od, lercanidipine 10mg daily, bisoprolol 10mg daily, simvastatin 40mg daily and linagliptin-metformin 2.5mg-1g bd. She has not taken any over the counter medications.

Her observations on arrival are: BP 141/72, HR 90, RR 28, saturations 93% on RA, temperature 35.2 degrees Celsius. She is alert and oriented with a clear chest and soft-non-tender abdomen.

Arterial blood gas and renal function are performed; the results are shown below:

FiO ₂	0.21	
pH	6.75	(7.35-7.45)
pCO ₂	24mmHg	(32-48)
pO ₂	86 mmHg	(83-108)
Bicarbonate	3 mmol/L	(22-32)
Sodium	132 mmol/L	(135-145)
Potassium	6.4 mmol/L	(3.5-5.2)
Chloride	102 mmol/L	(95-110)
Glucose	15.7 mmol/L	(3.0 -7.8)
Lactate	15.0 mmol/L	(0.5-2.2)
Urea	14.6 mmol/L	(3.0-8.0)
Creatinine	237 µmol/L	(40-90)

a). Analyse the above results, listing the major abnormalities and their clinical implication. Include calculations where relevant. (7 marks)

Abnormality	Interpretation

b). Give the most likely underlying aetiologies of the major acid-base abnormality. (1 mark)

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c). List your management priorities. Give drug doses and end points where relevant. (4 marks)

Question 15 (12 marks)

An 8-year-old girl is brought to the emergency department following a bicycle accident. She was wearing a helmet but no other safety gear. The child states she crashed into a fallen tree and was impaled on a stick. She is alert and distressed. When asked to describe the stick she indicates it was the length of her forearm and as thick as her thumb.

Her vital signs are:

Pulse 110 bpm

BP 105/70 mmHg

Cap refill 3 sec

Resp rate 24 breaths/min

SaO₂ 92% on 6L oxygen via non-rebreather mask

Examination reveals a 10cm laceration to the right lateral abdomen at the level of umbilicus (see picture in Props Booklet; Figure 5).

a) List eight potential injuries from the described mechanism.(4 marks)

b). List four(4) ways in which the paediatric abdomen is different to the adult abdomen. (4 marks)

c). State your management of this patient in the ED, including relevant investigations.(6 marks)

Question 16 (12 marks)

A 42-year-old female presents with fever five days after induction chemotherapy. Other than her malignancy she has no medical problems but does suffer from a rash when given penicillins.

Her vital signs are as follows:

HR 110bpm
BP 100/60mmHg
Temp 39.0 degrees Celsius
SaO₂ 98% room air
RR 24 breaths/min

You assume she is neutropenic and decide to treat empirically.

a). List two (2) options for the preferred antibiotic monotherapy for this patient. (1 mark)

b). List three (3) risk factors for tumour lysis syndrome (3 marks)

c). List three (3) metabolic features of tumour lysis syndrome other than renal impairment and hyperuricaemia (3 marks)

There is a prolonged wait for the patient to get seen by the oncology team and you are concerned that she will deteriorate if her hyperuricaemia goes untreated.

d). List two (2) interventions to treat hyperuricaemia secondary to tumour lysis syndrome in the ED. (1 mark)

The oncology registrar finally comes down to see the patient. The nurse attending to the patient comes to find you as the patient complained that the oncology registrar was abrupt and dismissive towards her and the patient is now crying.

e). How will manage this situation? (4 marks)

Question 17 (12 marks)

A 60-year-old man presents with a syncopal episode whilst at work. He is unable to describe any preceding symptoms and recalls upon waking up his colleagues standing around him. He is currently asymptomatic.

His ECG is shown in the Props Booklet (Figure 6)

a) List 4 abnormalities found on his ECG (4 marks)

After your initial assessment your patient deteriorates and becomes markedly bradycardic.

His formal vitals are:

GCS	13
HR	28 bpm
BP	70/40 mm Hg
SaO ₂	88% on room air
RR	28 breaths/min
Temperature	36.5 degrees Celsius

b) List 2 reversible causes of his bradycardia (2 marks)

c) List 6 steps in management for this patient (6 marks)

Question 18 (12 marks)

A 23-month old boy is brought in by his mother after ingesting an unknown quantity of her iron tablet thirty minutes ago. The child was found with 3 tablets remaining from a bottle that was previously around half full.

a). Complete the following table for the dose-related risk assessment of iron (4 marks)

Elemental iron dose (mg/kg)	Effect

One hour later, the child starts vomiting profusely and you are concerned he has had a significant ingestion of iron.

b). Complete the following table listing four (4) investigations you would perform and the corresponding result that would confirm significant iron ingestion. (4 marks)

Investigation performed	Result confirming significant ingestion

c). List two (2) methods of decontamination that are used in iron overdose and state when they would be used. (2 marks)

You consult with the on-call toxicologist who recommends starting chelation therapy.

d). State the drug and dose of the chelation therapy used in significant iron toxicity. (1 mark)

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