

Candidate number _____

BOOK THREE

QUESTION 19 (23 marks) - DOUBLE QUESTION

A 59 year old man presents with signs suggestive of a left anterior circulation stroke.

- i. Several pathological processes can mimic stroke. Complete the following table listing 5 “stroke mimics” and indicating features of assessment that would help to clarify if the patient has a stroke or a “mimic” (10 marks)

Condition (“mimic”)	Features that suggest mimic versus stroke

- ii. It appears that this patient has a stroke although the non-contrast brain CT is normal. What are the standard inclusion criteria used for stroke fibrinolysis (4 marks)

- iii. List six exclusion criteria for thrombolysis in stroke (6 marks)

- iv. The patient's wife, a Registered Nurse, wants to know about the risks & benefits of lysis for her husband's stroke. She has heard of the NINDS trial and the "three hour window". Complete the table below (3 marks)

Likelihood of improvement in functional outcome with lysis	
Risk of symptomatic ICH	
Overall mortality at 3 months	

QUESTION 20 (13 marks)

An 86 year old male presents to ED with severe abdominal pain. His medical history includes AF and IHD. He is taking aspirin and atorvastatin.

Vital signs are:

P 130

BP 160/90

RR 20

SaO₂ 97% RA

His abdomen is diffusely tender with guarding. Bedside USS of his abdomen is performed.

A SINGLE ULTRASOUND IMAGE IS SHOWN IN THE PROPS BOOKLET, PAGE 9

- i. Describe 3 positive findings in the USS image (3 marks)

- ii. Outline 4 immediate management steps that are required for this patient (4 marks)

The patient's blood pressure falls to 70 SBP while awaiting vascular surgeon arrival and he is now receiving a blood transfusion.

- iii. Define massive transfusion in an adult patient (2 marks)

- iv. List 4 target parameters when giving massive transfusion (4 marks)

QUESTION 21 (19 marks)

- i. List 5 different methods of spinal immobilisation for a suspected C-spine injury with neck pain but no abnormal neurology, and no other injuries (5 marks)

- ii. List 5 complications of cervical spine immobilisation (5 marks)

- iii. Clinical decision rules are frequently derived using logistic regression analysis. Define/describe logistic regression (2 marks)

- iv. List 4 exclusion criteria that were used in the derivation of the Canadian C-spine rules and preclude its use in practice (4 marks)

- v. According to the Canadian C-spine rules, which stable adult patients are mandated to have C-spine radiography (3 marks)

QUESTION 22 (14 marks)

A 24 year-old multiparous woman who is 36 weeks pregnant presents to triage in labour. She is transferred to the resuscitation room and the nurse tells you the head is on show. The maternity ward is located in a separate building to the ED.

- i. Outline 4 of your immediate actions (4 marks)

The baby is delivered within minutes. The cord is clamped and cut.

- ii. Outline 3 features of your routine initial management of the newborn infant (3 marks)

The cord has been clamped and cut and the placenta is still in-situ. The midwife is yet to arrive.

- iii. Describe 3 principles of management of the third stage of this labour (3 marks)

The placenta is delivered. It appears incomplete and the patient has very heavy PV bleeding.

- iv. List 4 of your immediate actions (4 marks)

QUESTION 23 (21 marks)

A 60 year old paraplegic man is complaining of chills and rigors. He is a Type 2 diabetic on metformin.

Vital signs
T 39 deg C
P 90
BP 110/70
RR 18
SaO₂ 99% RA

A CLINICAL IMAGE IS SHOWN IN THE PROPS BOOKLET, PAGE 10

- i. Describe the image and list your provisional diagnosis (2 marks)

- ii. List 4 predisposing factors for this condition (4 marks)

- iii. List 5 important investigations you will order and outline your reasoning (10 marks)

- iv. Repeat vital signs are pulse 110, BP 85/60, and RR 24.
Outline your early management steps. Provide doses and end points where appropriate (5 marks)

QUESTION 24 (17 marks)

A 24 year old man presents with a wound to his proximal right index finger after an accident on a construction site. You decide that the wound requires suturing.

- i. Describe the technique of a median nerve block (4 marks)

- ii. What would be the maximum volume of 1% lignocaine for this man, assuming a weight of 85kg? Show your calculations (2 marks)

- iii. List 6 clinical features of local anaesthetic toxicity (6 marks)

- iv. List the key steps in the management of severe local anaesthetic toxicity (5 marks)

QUESTION 25 (13 marks)

A 16 year old girl presents to ED after syncope during a running event at the school sports carnival. Her vital signs are GCS 15, P 70, BP 118/70, RR 18 and afebrile.

- i. List 6 relevant historical features (6 marks)

- ii. List 3 relevant findings on the ECG, and your provisional diagnosis (4 marks)

AN ECG IS SHOWN IN THE PROPS BOOKLET, PAGE 11

- iii. List your subsequent steps in management (3 marks)

QUESTION 26 (21 marks)

You are a doctor at a well-equipped mobile clinic providing health services to a 5-day ultra-endurance competition in the West MacDonald Ranges near Alice Springs. On the third day of competition a 30 year old female competitor is brought to your clinic having collapsed. She is confused, agitated and complaining of a headache.

- i. What are the key components of your initial assessment? List 3 features in each category (6 marks)

History	
Examination	

- ii. List 4 differential diagnoses for this presentation (4 marks)

- iii. The patient's GCS deteriorates and she has a prolonged generalised seizure. An iStat venous blood test is performed. The results are displayed. List two drugs you would use to urgently treat this problem now (6 marks)

pH 7.25
pCO₂ 42
pO₂ 25.2
HCO₃ 18
Hb 147 (120-160)
K⁺ 5.2 (3.2-5.2)
Na⁺ 114 (135-145)
Glu 6.9 (3.9-5.8)
Lac 6.2 (0.5-2.0)
Cr 115 (45-90)

Drug	Dose	Route

- iv. The patient has a rectal temperature of 42⁰C. List 5 complications of exertional heat stroke (5 marks)

QUESTION 27 (22 marks)

You receive a batphone regarding a usually well 83 year old man who was well this morning. His wife prepared him a drink, he went upstairs to drink it and a few minutes later his wife rushed upstairs to find him unconscious on the ground, possibly not moving his left side.

On arrival in ED he has the following vital signs:

HR 145, RR 40, BP 124/75, SaO₂ 98% on 15L NRBM, GCS 9 (E2V2M5), mottled peripheries

- i. List 5 potential causes for this presentation (5 marks)

You perform a CT head with contrast which is completely normal. His clinical status remains unchanged and the following VBG is obtained:

	Result
pH	7.15
CO ₂	26
Na	135
K	3.7
Cl	105
Gluc	8
Lactate	19
HCO ₃	9
Creat	80

- ii. Interpret the blood gas and list 4 possible toxicological causes for the findings (6 marks)

His wife shows you the packet bought from the health food store from which she had prepared his drink. You realise that the likely cause of his presentation is likely to be cyanide toxicity.

- iii. List 5 signs or symptoms of moderate or severe cyanide toxicity (5 marks)

- iv. Name 2 of the possible antidotes used in the treatment of cyanide toxicity and for each antidote list 2 potential problems with its use (6 marks)

Antidote	Potential problems