

NSW FELLOWSHIP COURSE NORTHERN SYDNEY HOSPITALS

January 2019

SAQ Practice Paper

Candidate directions:

- This is a 2 hour examination
- There are 2 separate books of 10 questions each
- Each book should be completed in 1 hour
- Props (ECGs, images) are reproduced in the accompanying props book
- Answer each question in the space provided on the examination paper
- Write your name on each page

Candidate Name _____

BOOK 1

Question 1 (14 marks)

You are working in a tertiary emergency department and have an ECG transmitted to you by the ambulance service. The patient is a 45 year old male who has had central chest pain for the last 20 minutes. The estimated time of arrival in your ED is 10 minutes.

A 12 LEAD ECG IS SHOWN IN THE PROPS BOOKLET, PAGE 1

- i. Describe and interpret the critical abnormalities on this ECG? (4 marks)

- ii. What advice would you offer the paramedics who are transferring the patient? (4 marks)

- iii. The cath lab is unavailable for 2 hours and a decision is made to give a fibrinolytic. List two (2) fibrinolytic agents that could be used and provide a dosing regimen for each (4 marks)

- iv. Outline a suitable peri-fibrinolysis anti-coagulant regime (2 marks)

QUESTION 2 (15 marks)

You have received a prehospital “batcall” about an 86-year-old female nursing home resident with acute respiratory distress who has just had return of spontaneous circulation (ROSC) after arresting in the ambulance en route. She is intubated and has a GCS 3.

- i. What is the definition of palliative care? (3 marks)

- ii. Prescribe one appropriate medication regime or management strategy for each symptom in the palliative semiconscious patient: (4 marks)

SYMPTOM	DRUG	DOSE	ROUTE	FREQ
PAIN				
AGITATION				
NAUSEA				
SECRETIONS				

The patient's daughter appears in the ED distressed. She tells you that her mother would never have wanted this. She has an ACD (Advanced Care Directive) stating not for CPR or ventilation or ICU care. She did not want to be transferred to hospital.

iii. What information should be in an ACD? (4 marks)

After confirming the ACD details and further family discussion, a decision is made to extubate her in ED

iv. What preparation is needed? (4 marks)

QUESTION 3 (15 marks)

A 42 year old female presents with haemoptysis at 19 weeks gestation. She was diagnosed with a pulmonary embolism 1 week after her 3rd delivery. Thrombophilic screen was subsequently negative and the PE was thought to have been pregnancy provoked. In this pregnancy she has been receiving a thromboprophylactic dose of clexane daily.

Over the last 7 days she has had rhinorrhoea and sore throat and now has 24 hours of cough with white sputum. Today she has experienced haemoptysis on 3 occasions. No fever recorded during the illness. There are no peripheral signs of DVT. No past history of malignancy. No recent travel or immobilisation. At triage HR 110, BP 100/-, saturations 98% air.

- i. Stratify the patient's risk for pulmonary embolism using a 3 tier model and justify this stratification (4 marks)

- ii. Outline your approach to d-dimer testing in this patient (3 points)

iii. List 3 causes of a false negative d dimer? (3 points)

iv. List 5 ECG findings typically seen in pulmonary embolism (5 marks)

QUESTION 4 (16 marks)

- i. Define “ED overcrowding” (2 marks)

- ii. Regarding the causes of ED overcrowding, for each category list two (2) examples (6 marks)

Category	Examples
Input	
Throughput	
Output	

- iii. Regarding the adverse consequences of ED overcrowding, for each category list two (2) examples (4 marks)

Category	Examples
Patient Effects	
Staff Effects	

- iv. Regarding potential solutions to ED overcrowding, for each category list two (2) examples (6 marks)

Category	Examples
Input	
Throughput	
Output	

QUESTION 5 (15 marks)

An obese man is brought to your ED following a rollover MVA. His estimated weight is 210kg. He has head and chest injuries.

- i. List four ways in which obesity affects assessment and/or management of the airway and breathing during the primary survey (4 marks)

- ii. Complete the table identifying two effects of obesity on each component of pharmacokinetics (8 marks)

Component	Effects of obesity
Absorption	
Distribution	
Metabolism	
Elimination	

- iii. Non-invasive BP measurement is difficult in the obese. Provide a detailed description of the recommended BP cuff bladder width, length and position (3 marks)

Question 6 (14 marks)

An 85 year old woman is brought to your ED by her daughter who visited her mother at home and found her to be confused.

She has early dementia but lives independently. She has mild hypertension and hypercholesterolaemia but is on no regular medications.

In the ED she appears to be confused and disoriented. HR 80 regular. BP 155/85. Afebrile.

- i. To assess this patient's cognition, one could use a *Mini Mental State Examination* or a *Six Item Screener*. Detail the components of one of these cognitive screening tests (4 marks)

- ii. Define delirium and identify the key characteristics that differentiate delirium from dementia (4 marks)

- iii. During her stay in the ED she becomes increasingly agitated and aggressive towards the nursing staff.

Complete the table detailing one oral and one parenteral medication suitable for use in a behavioural emergency in a delirious elderly patient. Provide an explanatory note identifying cautions, particular indications/contraindications and adverse effects where appropriate (6 marks)

Route	Medication	Initial dose	Explanatory notes
Oral			
Parenteral			

QUESTION 7 (16 marks)

You are the senior doctor in charge of a tertiary ED at 3pm when Ambulance Control state that there has been an explosion nearby.

- i. What 5 pieces of information are important to obtain from Ambulance Control (5 marks)

- ii. List 7 steps that you should perform after receiving this phone call (7 marks)

iii. Patients start arriving rapidly on foot and by ambulance. Using a triage sieve, classify (red, yellow, green) the following patients (4 marks)

1. Female 40s, lying on ambulance stretcher, GCS 14, RR 33, BP 105/80, P 110

2. Male 30s, limping up to triage unassisted, GCS 15, RR 26, BP 95/50, P 105

3. Female 20s, sitting in a wheelchair, obvious compound tibial fracture, GCS 15, RR 28, P 120

4. Male 50s, lying on stretcher, GCS 13, RR 25, BP 105/60, P 110

QUESTION 8 (15 marks)

A woman unexpectedly gives birth in your emergency department at 38 weeks gestation. You are tasked with resuscitating the newborn. Immediately after cutting the cord a female infant is placed on the resuscitaire in front of you.

She is floppy with no spontaneous movement and no respiratory effort

She is cyanosed

Heart rate 50 bpm

There is copious meconium stained liquor on the baby

- i. Before addressing the airway, what steps will you undertake? (3 marks)

- ii. Explain why oxygen saturations are measured on the right hand (rather than left hand) of a newborn baby (3 marks)

- iii. After ensuring adequate head positioning, airway opening & suctioning of secretions the baby still has inadequate respiratory effort. Outline the advantages and disadvantages of a T-piece ventilation device compared to a self-inflating bag in neonatal resuscitation (3 marks)

- iv. List the initial T-piece system settings you would use in this setting (4 marks)

FiO ₂	
Rate	
PEEP	
Positive Inspiratory Pressure	

- v. Describe how you would identify the umbilical vein (for catheter insertion) in an umbilical cord that has just been cut under the clamp (2 marks)

QUESTION 9 (15 marks)

One of the ED JMOs approaches you for advice about a 45-year-old female who presented with tinnitus and vertigo. You ask if she has any cerebellar signs but the JMO replies 'I forgot to check. What should I look for?'

- i. What are the components of the cerebellar examination? (4 marks)

- ii. The patient examines normally except for some decreased hearing in her left ear. What are the 'tuning fork hearing tests' and how do you interpret them? (8 marks)

Name of test	How do you perform it?	How do you interpret it?
Rinne's		
Weber's		

Your tests confirm that she has sensorineural deafness in the left ear. This patient denies any head injury or other trauma and she is otherwise well.

iii. Please list the atraumatic causes of this presentation (3 marks)

QUESTION 10 (17 marks)

A 30-year-old 90kg lady presents to your emergency department having taken a poly-pharmacy overdose including Panadeine Forte, carbamazepine and temazepam. You are considering treating her with activated charcoal (AC).

- i. List 4 general contraindications for this therapy (4 marks)

After a short period, she becomes drowsy, tachycardic (120 bpm) and hypotensive (85/43 mmHg). Further history reveals that she has taken up to 9g of carbamazepine.

- ii. List 4 investigations that should be performed in this patient (4 marks)

- iii. List 5 clinical features you would expect from a significant carbamazepine overdose (5 marks)

- iv. During your management, the patient has a generalized tonic-clonic seizure. List 4 conditions that should be excluded (4 marks)
