



Fellowship Practice Exam

May 2017 - Book 1

WRITTEN EXAMINATION SHORT ANSWER QUESTIONS

EXAMINATION TIME: 3 HOURS - 1 hour per booklet

Directions to Candidates

This booklet is one of three. It contains 9 questions. Allow 9 minutes for 3 page questions (1 and 9), and 6 minutes for 2 page questions (2 - 8). The entire booklet should take you 1 hour to complete.

1. Answer each question in the space provided in this question paper.
2. Do not write your name on this question paper.
3. Write your candidate number **on each page** in the space provided.
4. Cross out any errors completely.
5. Do not begin the exam until instructed to do so.
6. No examination papers or materials to leave the room.
7. Props are provided in a separate booklet.

Question 1 (18 marks)

You receive ambulance pre-notification of a patient in cardiac arrest. The patient is a 45 year old female with unknown past history. She complained of chest pain prior to collapse nearby to the hospital. She is currently in VF arrest with ACLS in progress. Estimated time of arrival is 5 minutes.

a) Other than duration of ACLS, state six (6) key pieces of information that should be obtained in ambulance handover. (6 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

The patient arrives. ACLS was performed for a total of 12 minutes. She is currently in slow AF at a heart rate of 40 /min with spontaneous circulation. An adrenaline infusion is running.

b) Should this patient be transferred urgently for primary coronary intervention ? (1 mark)

Question 1 (continued)

c) Justify your decision. State three (3) points in your answer. (3 marks)

1. _____

2. _____

3. _____

Prior to your decision, the patient deteriorates to ventricular fibrillation.

d) State four (4) benefits of cardiac ultrasound in the ongoing management of this patient. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 1 (continued)

Despite ongoing standard ACLS management, ventricular fibrillation persists for a further 20 minutes without return of spontaneous circulation.

e) List four (4) circumstances under which prolonged CPR may be warranted for this patient.(4 mark)

1. _____

2. _____

3. _____

4. _____

Question 2 (14 marks)

A 3 year-old boy presents to your ED at 0400hrs with acute asthma, triggered by a viral upper respiratory tract infection. Examination reveals:

GCS 15
 Heart rate 110 bpm
 Oximetry 91% room air

The child speaks in short phrases. He has moderate subcostal recession. His mother last administered salbutamol via spacer 2 hours ago. The child has never been to hospital before, for asthma. He weighs 15kg.

a) Complete the following table by listing three (3) different key treatment interventions in the first hour, for this child. Assume there are no contraindications.(6 marks)

	Agent	Route	Dose	Frequency
1				
2				
3				

b) If this child was to clinically deteriorate despite initial treatment, list three (3) agents you can administer, in addition to the above. (3 marks)

1. _____

2. _____

3. _____

Question 2 (continued)

c) If invasive ventilation was indicated for this child, complete the following table about your interventions. (3 marks)

Principal Induction Agent for RSI:	
Inspiratory to Expiratory (I:E) Ratio on Ventilator:	
Maximum Tolerated Peak Airway Pressure (in cmH₂O):	

d) Other than trigger avoidance, state two (2) evidence-based interventions that are effective for primary prophylaxis (prevention) in a 3 year-old child whose asthma attacks typically occur fortnightly. (2 marks)

1. _____

2. _____

Question 3 (12 marks)

A 53 year old lady presents to your ED with sudden onset of vertigo. She appears distressed with nausea and vomiting and reluctant to open her eyes. She describes being unsteady on her feet and feels she is too unwell to sit up in bed.

- a) List three (3) differential diagnosis for central and three (3) for peripheral causes of her vertigo. (6 marks)

	DDx	
Peripheral	1	
	2	
	3	
Central	1	
	2	
	3	

Question 3 (continued)

Her neurological examination is normal except for prominent nystagmus. You decide to proceed with HINTS test.

b) List the three (3) components of the HINTS test and for each state the findings consistent with a peripheral nerve lesion. (6 marks)

	Component	Findings
1		
2		
3		

Question 4 (12 marks)

A 22-year-old man presents with a 2-hour history of increasing R forearm pain after working in his garden. He tells you there are "lots of spiders around" and you suspect a red back spider bite.

a) List three (3) other symptoms or signs you would look for to confirm the diagnosis. (3 marks)

1. _____

2. _____

3. _____

b) List two (2) medications you would give as a priority, include dosage (2 marks)

1. _____

2. _____

Question 4 (continued)

c) What three (3) pieces of information, regarding red back antivenom use in this man, would you explain to the registrar who is looking after this patient? (3 marks)

1. _____

2. _____

3. _____

d) List the most important early complication of antivenom administration. (1 mark)

e) List the most important delayed complication of antivenom administration. (1 mark)

f) List two (2) symptoms of this delayed complication. (2 marks)

1. _____

2. _____

Question 5 (12 marks)

A 36-year-old female presents with a two-week history of sore throat with intermittent fever, without cough or dyspnoea. Her voice sounds a bit high pitched but not muffled.
Her observations are:

BP	135/65	mmHg
HR	90	/min
Sats	99%	RA
Temp	38.3°C	

a) List five (5) likely differential diagnoses for her condition. (5 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

She has had an x-ray arranged by her GP and shown in **PROPS BOOKLET ; page 3**

b) What classical sign is seen on her X-ray ? (1 mark)

Question 5 (continued)

c) List three (3) signs/symptoms which are predictive of airway threat in this patient (3 marks).

1. _____

2. _____

3. _____

d) List two (2) antibiotic options for this patient with details if no previous history of allergy. (2 marks)

	Antibiotic	Route and dose
1		
2		

e) List your antibiotic choice if patient is anaphylactic to Penicillin class with details. (1 marks)

Antibiotic	Route and dose

Question 6 (12 marks)

A 2 year old girl was discharged from your ED last night with a presumptive diagnosis of simple febrile convulsion. No investigations were performed.

She has returned after a tonic clonic seizure which self terminated and is now :

GCS = 6 (no spontaneous eye opening, withdraws when IV inserted, no vocalisation)

HR	146	/min
Sats	90 %	RA
Temp	36.6°C	
RR	12	/min
Cap return	< 2 seconds	

a) List four (4) risk factors that increase the recurrence rate of a further febrile convulsion. (4 marks)

1. _____

2. _____

3. _____

4. _____

b) List three (3) immediate bedside procedures you would perform on this patient. (3 marks)

1. _____

2. _____

3. _____

Question 6 (continued)

She has another tonic clonic seizure ;

c) List one (1) parenteral medication with dosage to immediately terminate the seizure. (1 mark)

Medication	IV dosage

d) List one (1) parenteral medication with dosage to prevent further seizures. (1 mark)

Medication	IV dosage

e) List three (3) causes for the seizure (apart from a febrile convulsion) that should be considered.(3 marks)

1. _____

2. _____

3. _____

Question 7 (12 marks)

A 35-year-old male is brought to your Emergency Department by his concerned family, because of his strange behaviour and agitation at home. He physically attacked his father, when he tried to calm him down.

You're informed by triage nurse, the patient is reluctant to get assessed and wants to leave.

a) List four (4) differential diagnostic categories for this patient. (4 marks)

1. _____

2. _____

3. _____

4. _____

b) State four (4) steps in escalating management of an acutely agitated patient? (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 7 (continued)

Patient becomes verbally aggressive and is trying to leave. He is refusing oral medication.

c) List two (2) parenteral medications with details to control the situation (4 marks).

Medication	Stat dose	Repeat dose after (minutes)	Maximum dose in 24 hrs

Question 8 (12 marks)

A 2 year old girl presents to your tertiary ED with burns after pulling a pot of boiling water from a stove. The incident occurred 20 minutes ago. Her distraught mother brought her straight to ED.

Her photo is shown in PROPS BOOKET ; Page 4.

Her vital signs on arrival:

HR	150	/min
BP	90/50	mmHg
Sats	95 %	RA
RR	35	/min
Wt	10 Kg	

a) State five (5) initial steps in your management of the burnt area over the next 20 min. (5 marks)

1. _____
2. _____
3. _____
4. _____
5. _____

Question 8 (continued)

b) State your IV fluid management for this patient, assuming 12% Total Body Surface Area burned (7 marks).

	Calculation	Rate	Fluid
Resuscitation		Initial Subsequent	
Maintenance			

Question 9 (18 marks)

You are working in a rural emergency department (with on site General Surgery and Anaethetics services and 90 Km away from a trauma centre) on a Saturday evening. A 35 year old previously well male without any allergies, is brought in by ambulance following a motor vehicle accident. He was the restrained driver of a car that skidded in wet weather and struck a tree. His only injury is a strike to the left lateral head.

On arrival he is alert , his pupils are equal and reactive to light but he is amnesic to the events and repeatedly asks staff : what had happened.

His vitals are:

BP	130/85	mmHg
HR	90	/min
Sats	98%	RA
Temp	36.5°C	
GCS	14	(E4 V4 M6)

CT scan of the patient is provided in the PORPS BOOKLET ; Pages 5 and 6.

a) State three (3) most important abnormal findings (3 marks).

1. _____

2. _____

3. _____

Question 9 (continued)

Following the CT the patient drops his GCS to 10 (E2, V3, M5). His pupils remain equal. You decide to intubate him.

b) State five (5) important considerations when intubating this patient (5 marks).

1. _____
2. _____
3. _____
4. _____
5. _____

Your intubation progresses smoothly and the patient is stable. Due to bad weather, Helicopters cannot fly. You decide to transfer the patient by road ambulance to the trauma centre.

c) List five (5) important steps in preparing for the transfer of this patient. (5 marks).

1. _____
2. _____
3. _____
4. _____
5. _____

Question 9 (continued)

As you prepare to leave, the patient becomes bradycardia (HR 54) and hypertensive (BP - 200/110). Your nurse informs you that the patient's left pupil has become dilated.

d) State your immediate five (5) actions for his condition (5 marks).

1. _____

2. _____

3. _____

4. _____

5. _____