

The Prince Charles Hospital  
The Royal Brisbane & Women Hospital  
Redcliffe Hospital  
Caboolture Hospital

# Metro North Hospitals ACEM Fellowship Trial Examination

2018.1

Short Answer Questions

SAQ Paper

Questions only

Booklet Two

This paper is property of Metro-north Emergency Departments. It should not be distributed or published without previous permission of the DEMENT team please

# **ACEM Fellowship Trial Examination**

**2018.1**

## **Short Answer Questions**

### **SAQ Paper**

# **Booklet two**

Examination time: 180 Minutes

Direction to Candidates:

- 1- All questions must be attempted
- 2- Answer each question in the space provided
- 3- Enter your name for each question
- 4- This paper has been divided into 3 parts, each part is to be completed in 60 minutes

Booklet one:	SAQ 1-9
Booklet two:	SAQ 10-18
Booklet three:	SAQ 19-27
Props Booklet:	All props

**SAQ 10 (9 Minutes)**  
**(Total 18 marks)**

**Candidate name:**

A 56 year old female presents to your Emergency Department with acute onset dizziness. She has no significant past medical history and does not take any regular medications and has no allergies. Your assessment is consistent with vertigo.

1. list your differential diagnoses. (8 marks)

	Differential Diagnoses
Central Vertigo	
Peripheral Vertigo	

2. Fill out the following table with regards to differentiating between central and peripheral vertigo.

(6 marks)

Symptoms	Peripheral Vertigo	Central Vertigo
Onset		
Severity		
Pattern		
Nystagmus		
Aggravation by positioning		
Fatigue of Symptoms / Signs		

This paper is property of Metro-north Hospitals and should not be distributed or published without permission of the DEMENT teams.

3. What are the components of the HINTS exam and its clinical significance of the findings?  
(6 marks)

Component of exam	Clinical significance of examination finding

**SAQ 11: (6 Minutes)**  
**(Total 12 Marks)**

**Candidate Name:**

A 55 year old man is brought to your ED with sudden onset abdominal pain and vomiting. His past medical history includes atrial fibrillation with poor compliance with medications. He has had 10mg of intravenous Morphine with little relief of his symptoms.

His vitals signs are:

HR 110/min (irregular)

BP 110/70mmHg

RR 20/min

SpO2 93% RA

**Questions:**

- 1. List 5 differential diagnoses you would consider for this patient's presentation. (5 marks)**


- 2. List & justify 5 investigations would you request in the ED. (5 marks)**

<b>Investigation</b>	<b>Justification</b>

- 3. Despite multiple Morphine boluses of 0.1mg/kg/dose given over an hour, he remains in severe pain. List 3 other options for analgesia that could be provided in the ED? (2 marks)**


**SAQ 12: (6 Min)  
(12 Marks)**

**Candidate Name:**

You are a consultant working in a rural emergency department. The local ambulance service alerts you to a critically unwell child being brought to your department. She is a 4 week old girl found by her mother to be grey and floppy. Ambulance states that she is centrally cyanotic, with a capillary refill of 5 seconds.

- 1. List 4 immediate steps you would take to prepare for arrival. (2 marks)**


- 2. On arrival the infant has unrecordable saturations, is mottled, making weak respiratory efforts, and has a capillary return of 5 seconds. The mother reports that the child has congenital heart disease, and is due for surgical repair in the coming weeks.**

**Complete the following table on duct dependant congenital heart disease.**

**(3 marks)**

Duct dependant systemic circulation	
Duct dependent pulmonary circulation	
Duct dependant systemic and pulmonary circulation	

- 3. List three non-duct dependant forms of congenital heart disease.**

**(3 marks)**


**4. List two other cardiac conditions that may present in the neonatal period.**

**(2 marks)**


**5. List 2 other causes of neonatal collapse related to endocrine system:**

**(2 Marks)**




**SAQ 13:(6 minutes)  
(Total 12 marks)**

**Candidate Name:**

A 32 year old woman is referred to your ED with a 2/52 history of initially fatigue and fevers but now has developed a petechial rash.

Her GP has provided full blood count test results as follows:

Hb 90  
Platelets 25  
WCC 7.7

Her vitals are as follows:

GCS 14/15 (mildly confused)  
HR 101 beats/min  
BP 130/60 mmHg  
O2 Sat 98% on RA  
Temp 37.3 deg

1. List 4 possible differential diagnoses in this case. (4 marks)


2. List 4 investigations you would order and state how each would help in differentiating between the possible diagnoses you have listed above (4 marks)

	Investigation	Reasoning
1.		
2.		
3.		
4.		
5.		

3. For each of your differentials list above, state the definitive management for each.  
(4 marks)


**SAQ 14: (6 minutes)**  
**(Total marks 12)**

**Candidate Names:**

A 30 year old male is referred by his GP for an enlarging anterior neck mass suggestive of a goitre. He is tremulous and tachycardic.

1. What is Pemberton's sign? (2 marks)

--

2. List 5 possible precipitants of thyroid storm (5 marks)


3. What are the 5 main aims of thyroid storm treatment? Give an example for each (5 marks)

<b>Aims</b>	<b>Example</b>

**SAQ 15 :(6 minutes)  
(Total 12 Marks)**

**Candidate Name:**

Regarding Burn injuries:

- 1. List 2 different methods for estimating burns TBSA% (1 Marks)**


- 2. What are the 4 different burns depths? (2 Marks)**


- 3. List 3 scenarios when a patient with burns requires IV fluids? (3 Marks)**


- 4. How are initial fluid requirements calculated in burns, describe the details? (1 Marks)**

--

**5. List 5 patient scenarios that would require referral to a burns centre:  
(5 Marks)**


**SAQ 16: (6 Minutes)**

**Candidate Name:**

**(Total marks 12)**

You respond to an emergency alarm activation in a monitored cubicle in your emergency department, in which a Senior House Officer has been administering 30mL of 0.5% bupivacaine for a femoral nerve block to a 50kg 72yr female patient with a fractured neck of femur. The patient was seen to become unresponsive and is now pulseless. Monitoring shows a wide complex tachycardia at 180bpm.

1. Outline your immediate response to this situation [3 marks]


2. List specific antidotes you would administer, with doses, to be given in the resuscitation of this patient [2 marks]


3. Indicate the safe maximum dose of bupivacaine for this patient, and whether this was exceeded in this instance [2 marks]


4. Following successful resuscitation and transfer of the patient to the ICU, what further administrative responsibilities do you need to address? [4 marks]


5. What departmental measures might be taken to minimise the risk of a repeat of this event in future? [1 mark]

**SAQ 17: (6 Minutes)**

**Candidate Name:**

**(Total Marks 12)**

A 32 year old male is brought to your ED by the ambulance in refractory VF. He has a down time of approximately 35minutes and has received advanced life support in accordance with published guidelines.

His partner states he self discharged yesterday after being diagnosed with myocarditis.

1. The Australian and New Zealand Committee on Resuscitation recommend the use of prospectively validated termination of resuscitation (TOR) rules for out of hospital cardiac arrests (OHCA).

List 4 criteria used by a prospectively validated TOR rule in the setting of OHCA receiving advanced life support:

(4 Marks)


2. List two (2) pros and two (2) cons with the use of mechanical CPR devices in OHCA

(4 Marks)

Pros	Cons

3. Which Extra Corporeal Membrane Oxygenation (ECMO) modality would be most appropriate for this patient and why?

(2 marks)




4. List two (2) contraindications to commencement of ECMO.

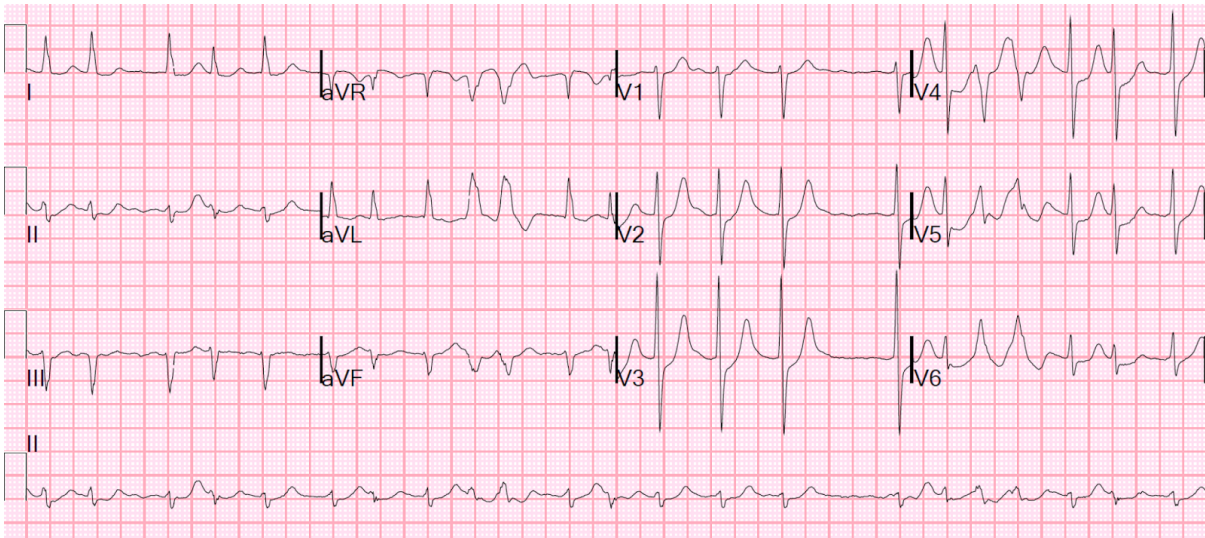
(2 Marks)


**SAQ 18 (9 minutes)**  
**(Total 18 Marks)**

**Candidate name:**

You are the duty consultant covering the resuscitation area in a tertiary ED. A 56 year old male has been brought in complaining of chest heaviness, dyspnoea and faintness. He was discharged 3 days ago at Day 9 post-CABG for a myocardial infarction.

His 12-lead ECG has been reproduced below:



His observations are:

- Temperature 36.2 degrees
- HR 92 /min
- BP 85/52 mmHg
- RR 22 /min
- SPO2 96% on 6L Hudson mask
- BSL 5.6 mmol/l

Questions

1. List 5 differential diagnosis for this patient's presentation. (5 marks)


2. List and justify 3 investigations that you would perform at the bedside. (6 marks)

Investigations	Justification

You have not identified an immediately reversible cause for this patient's presentation. You suspect that his clinical findings may be due to his underlying coronary artery disease.

3. In an escalating manner, state 3 approaches (including route and doses) to haemodynamic resuscitation. (3 marks)


4. State 2 end points of haemodynamic resuscitation for this patient. (2 marks)


5. State and justify this patient's preferred disposition. (2 marks)
