ID NUMBER: ☐ ☐ ☐ ☐ ☐

University Hospital, Geelong

Emergency Medicine

Trial Fellowship Exam

Short Answer Questions (SAQ)

Week 14

DIRECTIONS TO CANDIDATE

1. Answer each question in the space provided in this question paper.
2. Do not write your name on this question paper.
3. Enter your examination number in the space below.
4. Cross out any errors completely.
5. Do not begin the exam until instructed to do so.
6. Do not take examination paper or materials from this room.
7. The booklet binder may be removed during the exam.

QUESTION & ANSWER

BOOKLET

Question 1 (18 marks)

A 45 year man presents following a collapse.

An ECG is taken. Refer to the props booklet- page 1.

His observations are:

BP	130/70	mmHg
Temperature	36	°C
O2 saturation	98%	on room air

a. State four (4) abnormal findings shown in this ECG. (4 marks)

1. _____

2. _____

3. _____

4. _____

b. What is the significance of this ECG for this patient? List two (2) points of significance. (2 marks)

1. _____

2. _____

Question 1 (continued)

c. What is the pathophysiological basis for this problem? List three (3) points. (3 marks)

1. _____

2. _____

3. _____

d. List four (4) likely precipitating causes for this presentation. (4 marks)

1. _____

2. _____

3. _____

4. _____

Question 1 (continued)

e. List four (4) other clinical features that may also be associated with this problem. (4 marks)

1. _____

2. _____

3. _____

4. _____

f. What is the specific treatment of choice for this problem? (1 mark)

_____

Question 2 (12 marks)

A 45 year old man is brought into your emergency department, by ambulance, with isolated severe pain in his right hip after a fall from his motorbike one hour earlier. He has a past history of IVDU.
The ambulance officers were unable to obtain IV access and have provided penthrane for analgesia alone.
His ambulance handover observations are:

BP	95/50	mmHg
HR	130	bpm
RR	24	bpm
Oxygen saturations	98%	RA
GCS	15	

His primary survey, including a FAST scan, is negative. You arrange a trauma series plain xray.

a. State five (5) steps in your initial approach to provision of analgesia. Include any drug doses and routes. (5 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

Question 2 (continued)

A hip X-ray is taken- refer to the props booklet- page 2.

b. State five (5) abnormal findings shown in this xray. (5 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

His injuries are confirmed to be isolated to those shown in the hip xray only.
Despite your initial provision of analgesia, he continues to complain of severe pain.

c. State two (2) points in your on-going approach to his analgesia. Include any drug doses and routes. (2 marks)

1. _____

2. _____

Question 3 (12 marks)

a. Complete the table to distinguish between the investigative features of diabetic ketoacidosis and hyperosmolar non ketotic state. (4 marks)

	Investigation	**Diabetic ketoacidosis**	**Hyperosmolar non ketotic state**
1. **(1 mark)**			
2. **(1 mark)**			
3. **(1 mark)**			
4. **(1 mark)**			

Question 3 (continued)

b. Complete the table to distinguish between the management of diabetic ketoacidosis and hyperosmolar non ketotic state. (8 marks)

	Key Management step (4 marks)	**Diabetic ketoacidosis (2 marks)**	**Hyperosmolar non ketotic state (2 marks)**
1			
2			
3			
4			

Question 4 (12 marks)

A 65 year old woman presents with a severe headache. She is otherwise asymptomatic and takes no regular medications.
Her observations are:

BP	245/130	mmHg
HR	80	bpm
Respiratory rate	18	bpm
Temperature	36	°C
Oxygen saturation	100%	room air
GCS	15	

a. List four (4) key examination findings to seek on your examination. List why each sign is important. (4 marks)

	Examination finding	**Why is this sign important?**
1 **(1 mark)**		
2 **(1 mark)**		
3 **(1 mark)**		
4 **(1 mark)**		

Question 4 (continued)

b. List four (4) drug options for the management of her blood pressure. For each state your initial dose and route. (8 marks)

	Drug option (4 marks)	**Dose/ route (4 marks)**
1		
2		
3		
4		

Question 5 (12 marks)

A 6 week old female infant presents with vomiting.

a. List six (6) likely causes of vomiting in this patient. State the clinical feature/s that would allow you to differentiate each cause. (12 marks)

	Cause of vomiting (6 marks)	**Distinguishing clinical feature/s (6 marks)**
1.		
2.		
3.		
4.		
5.		
6.		

Question 6 (12 marks)

A 23 year old man presented with a painful neck after diving into a pool.

A lateral Cervical spine X-ray is taken- refer to the props booklet- page 3.

a. State three (3) abnormal findings shown in his xray. (3 marks)

1. _____

2. _____

3. _____

b. Is this injury likely to be stable or unstable and why? (2 marks)

Stable or unstable (1 mark)	**Why? (1 mark)**

Question 6 (continued)

c. List four (4) physical methods that you could utilise to immobilise this patient. (4 marks)

1. _____

2. _____

3. _____

4. _____

d. If the patient is to remain not intubated, list three (3) other non-physical measures could you employ to ensure spinal immobility. (3 marks)

1. _____

2. _____

3. _____

Question 7 (10 marks)

An 87 year old man from a nursing home presents following a generalised seizure.

His observations are:

BP	120/70	mmHg
HR	100	bpm
Temperature	36.8	°C
Oxygen saturation	97%	room air
GCS	12	E4, V3, M5

Initial blood results are taken- refer to the props booklet- page 4.

a. Provide two (2) calculations to help you to interpret these results. (2 marks)

Derived value 1: _____

_____

Derived value 2: _____

_____

b. What is the likely cause for this clinical picture? (2 marks)

_____

_____

_____

Question 7 (continued)

c. Complete the following table demonstrating three (3) key treatment tasks and state how you would achieve each of these. (6 marks)

	Key treatment task (3 marks)	**How will you achieve the task? (3 marks)**
1		
2		
3		

Question 8 (12 marks)

A 4 year old girl presents with a painful right eye for the last 1 day.

A photograph of the girl is taken in the props booklet- refer page 5.

a. Using the table provided, list six (6) clinical features that would differentiate between insect bite, preseptal and orbital cellulitis. (6 marks)

	Clinical feature (6 marks)	**Insect bite**	**Preseptal cellulitis**	**Orbital cellulitis**
1				
2				
3				
4				
5				
6				

Question 8 (continued)

b. Assuming the diagnosis is orbital cellulitis, list three (3) key management points for this patient. Provide one justification for each choice. (6 marks)

	Key management point (3 marks)	**Justification (3 marks)**
1		
2		
3		

Question 9 (18 marks)

a. Complete the table, listing four (4) causes of neonatal jaundice. List each cause in the characteristic timeframe for appearance of each particular cause of jaundice. (4 marks)

Time to onset of jaundice	**Cause of neonatal jaundice (4 marks)**
< 2 days	**1.**
2-3 days	**1.**
3-7 days	**1.**
> 1 week	**1.**

Question 9 (continued)

b. List two (2) biochemical features seen with pathological jaundice. (2 marks)

1. _____

2. _____

c. List three (3) options for the management of pathological jaundice. (3 marks)

1. _____

2. _____

3. _____

d. Define "Apparent Life Threatening Event". (1 mark)

_____

_____

Question 9 (continued)

e. List three (3) features of a benign "Apparent Life Threatening Event". (3 marks)

1. _____

2. _____

3. _____

f. List five (5) investigations that are indicated in a patient who shows features of a serious "Apparent Life Threatening Event". (5 marks)

1. _____

2. _____

3. _____

4. _____

5. _____

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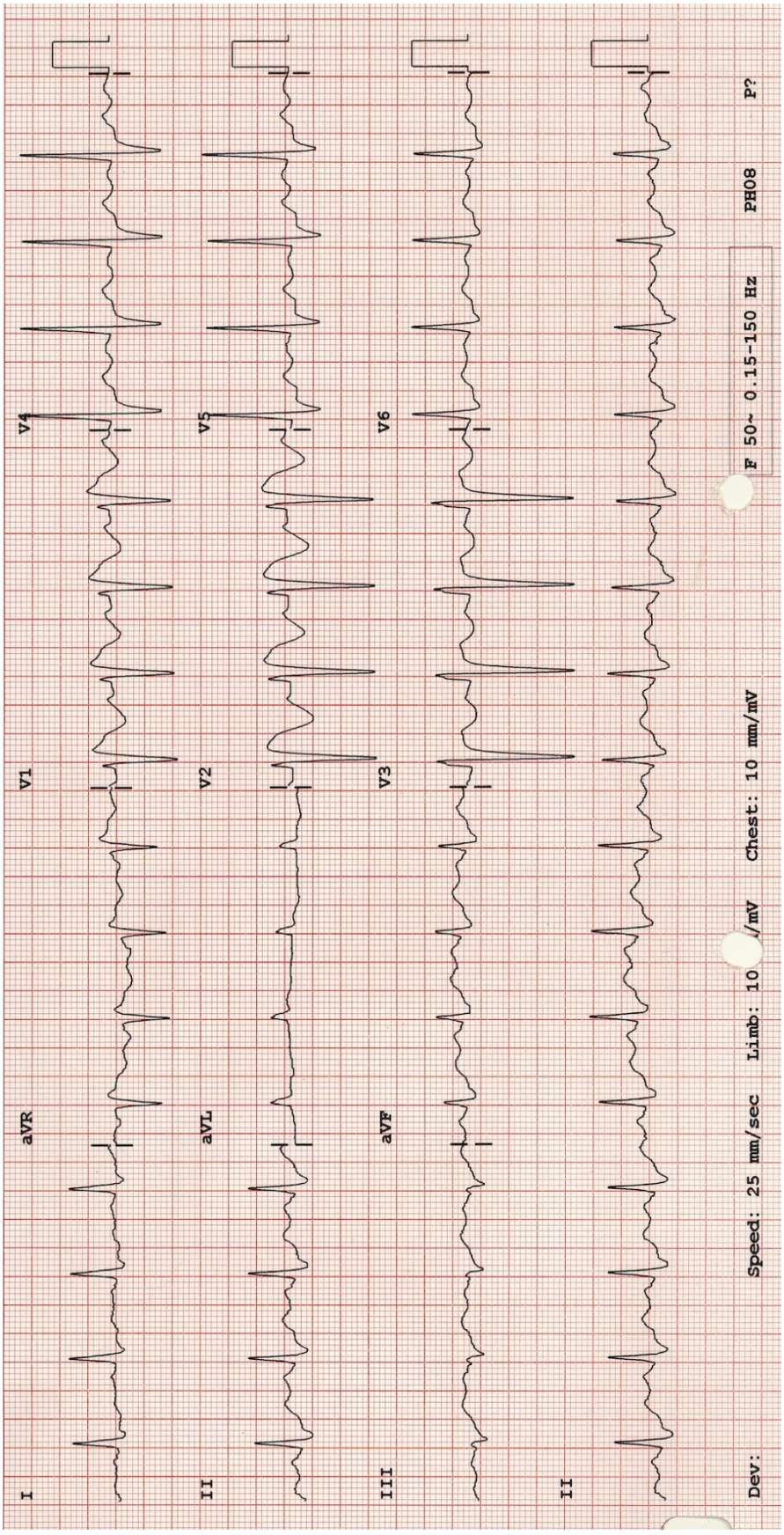
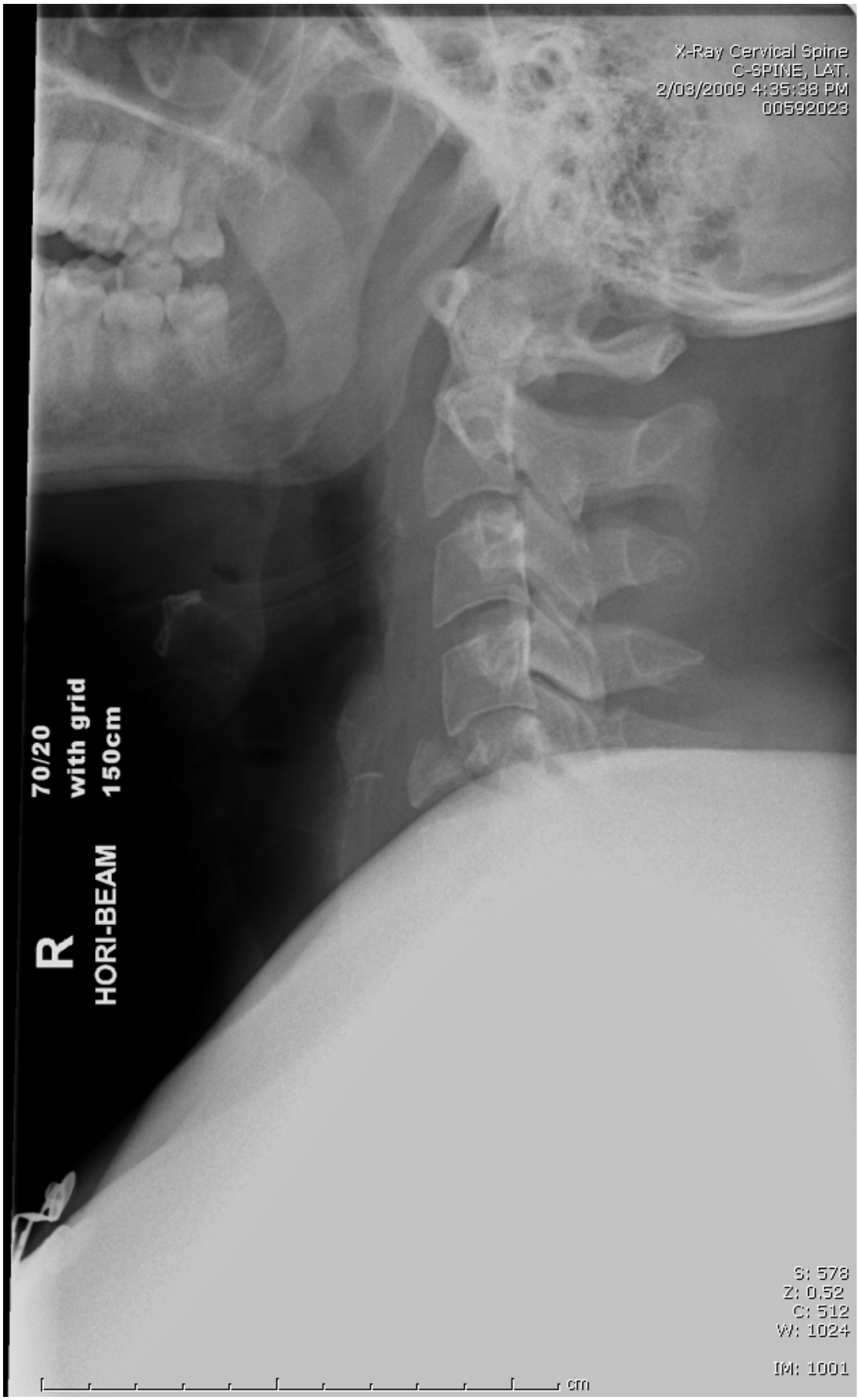
PROP BOOKLET

Question 1


I
aVR
V1
V4
II
aVL
V2
V5
III
aVF
V3
V6
II
Dev:
Speed: 25 mm/sec Limb: 10 /mV Chest: 10 mm/mV
F 50~ 0.15-150 Hz
PH08
P?

Question 2

Question 6


X-Ray Cervical Spine
C-SPINE, LAT.
2/03/2009 4:35:38 PM
00592023
R
HORI-BEAM
70/20
with grid
150cm
S: 578
Z: 0.52
C: 512
W: 1024
IM: 1001
cm

Question 7

			Reference Range
Na^+	183	mmol/L	(135-145)
K^+	4.9	mmol/L	(3.2-4.3)
Cl^-	137	mmol/L	(99-109)
HCO_3^-	25	mmol/L	(21-28)
Urea	23.5	mmol/L	(2.7-8.0)
Creat	105	micromol/L	(50-100)
Glu	6.9	mmol/L	(3.0-6.0)
PO_4^-	2.41	mmol/L	(0.65-1.45)
Ca^{2+}	2.39	mmol/L	(2.0-2.55)
Mg^{2+}	1.12	mmol/L	(0.70-0.95)

Question 8