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**University Hospital, Geelong**  
**Emergency Medicine**  
**Trial Fellowship Exam**  
**Short Answer Questions (SAQ)**  
Week 29

**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)

An 84 year old woman is brought to your emergency department by her daughter, who is her carer. Her daughter reports that the patient is having difficult with mobilisation today. The triage nurse approaches you with a concern of possible elder abuse.

- a. List four (4) behaviours that the carer may display that would support the concern of elder abuse. (4 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

- b. List four (4) examination features of the patient that would support the concern of elder abuse. (4 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

### Question 1 (continued)

The patient appears unwell and frail. You make a clinical and radiological diagnosis of left lower lobe pneumonia.

Her vital signs:

|        |       |                         |
|--------|-------|-------------------------|
| BP     | 75/60 | mmHg                    |
| HR     | 160   | bpm (sinus tachycardia) |
| RR     | 50    | bpm                     |
| Temp   | 39.6  | °C                      |
| O2 sat | 86%   | on room air             |
| GCS    | 10    | (E3, V3, M4)            |

The patient fails to respond to your escalation of treatment over the next 1 hour. The daughter says she wants “everything done”.

- c. List five (5) factors that you would consider when discussing this request with the daughter. (5 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

### Question 1 (continued)

The daughter reports that the patient is a registered organ donor and wishes to pursue the possibility of organ donation.

- d. List five (5) criteria that must be met, in general, for the consideration of organ donation. (5 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

## Question 2 (13 marks)

A 35 year-old woman driver was involved in a motor vehicle collision. She was wearing a seatbelt, self-extricated herself and was ambulant at the scene. While giving details to the police, she reported neck pain which was not present for the first 10 minutes post collision. She arrives by ambulance in sitting position without spinal immobilisation. A rigid cervical collar is placed at triage. Her main complaint is of moderate severity neck pain.

- a. List four (4) features on history or examination that would mandate the need for cervical spine imaging. (4 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

- b. Assuming the absence of all of these features, list three (3) low risk factors of this presentation as stated that allow safe assessment of range of movement of her cervical spine. (3 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Question 2 (continued)**

- c. A decision is made to progress to imaging. State one (1) important pro and one (1) important con for the imaging options below, for this patient. (6 marks)

| <b>Imaging option</b>    | <b>Pro<br/>(3 marks)</b> | <b>Con<br/>(3 marks)</b> |
|--------------------------|--------------------------|--------------------------|
| <b>Plain xray series</b> |                          |                          |
| <b>CT C Spine</b>        |                          |                          |
| <b>MRI C spine</b>       |                          |                          |

### Question 3 (13 marks)

A 16 year old girl presents to the emergency department with lower abdominal discomfort and per vaginal bleeding of 24 hour duration. She thinks that she may be pregnant on the basis of one missed period (LNMP 6 weeks ago).

- a. Complete the table below, demonstrating, in list format, your understanding of the role of a urine pregnancy test in this patient. (4 marks)

|  |    |
|--|----|
| <b>Significance of a positive result<br/>(2 marks)</b> | 1. |
|  | 2. |
| <b>Significance of a negative result<br/>(2 marks)</b> | 1. |
|  | 2. |

Her urinary pregnancy test is positive.

- b. List two (2) circumstances in which a vaginal speculum examination would be indicated for this patient. (2 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_

### Question 3 (continued)

A transvaginal ultrasound shows a normal 6 week intrauterine pregnancy. The patient states that she does not wish to continue her pregnancy.

- c. List three (3) factors on history that you would seek from the patient with respect to this statement. (3 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

The patient's parents arrive and demand to know what is wrong with her.

- d. List four (4) steps that you would take in response to this request. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_



### Question 4 (12 marks)

An 18 month boy presents with 24 hours of vomiting and bloody diarrhoea.

- a. Other than Haemolytic uraemic syndrome, list four (4) likely causes for this presentation. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

- b. List four (4) features on examination that would support the diagnosis of haemolytic uraemic syndrome. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

**Question 4 (continued)**

- c. List four (4) laboratory findings that are consistent with haemolytic uraemic syndrome. (4 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

### Question 5 (12 marks)

A 64 year-old man presents to your Emergency Department with chest pain.

**An ECG is taken- Both his previous resting ECG ( "ECG 1" ) and ECG his current ECG with pain ( "ECG 2" ) are shown- refer to the props booklet page 1.**

a. State five (5) abnormal findings in **ECG 1**. (5 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

b. State two (2) different abnormal findings shown in **ECG 2**. (2 marks)

1. \_\_\_\_\_

2. \_\_\_\_\_

### Question 5 (continued)

- c. State the significance of the changes in **ECG 2**, when compared to **ECG 1**. Include reference to evidence based criteria in your answer. Include five (5) statements in your answer. (5 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

### Question 6 (12 marks)

A 3 year old male presents with shortness of breath.

**A CXR is taken- refer to the prop booklet page 2.**

a. What is the diagnosis? (1 mark)

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b. State five (5) radiological features in this CXR that support this diagnosis. (5 marks)

1. 

---

2. 

---

3. 

---

4. 

---

5. 

---

**Question 6 (continued)**

- c. List six (6) factors that you would consider when determining disposition for this patient. (6 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

### Question 7 (12 marks)

A 23 year old man with a decreased level of consciousness is being assessed in your Emergency department.

**An arterial blood gas is taken- refer to the props booklet page 3.**

His arterial blood gas results with reference ranges are shown below:

- a. Provide four (4) calculations to help you to interpret these results. (4 marks)

**Derived value 1:**

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**Derived value 2:**

---

---

**Derived value 3:**

---

---

**Derived value 4:**

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### Question 7 (continued)

- b. Using this scenario and the derived values, list three (3) likely potential causes for the abnormal results. (3 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

- c. State two (2) pros and three (3) cons for the use of bicarbonate in this patient. (5 marks)

**Pros:**

1. \_\_\_\_\_
2. \_\_\_\_\_

**Cons:**

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



### Question 8 (13 marks)

Complete the table below, by stating one (1) expected dose-dependent clinical effect for each dose range of Venlafaxine overdose. State also one (1) point of management of venlafaxine overdose for each dose range up until > 7 grams- for this dose range state three (3) management steps. (10 marks)

| Dose range | Clinical effect<br>(4 marks) | Management indicated<br>(6 marks) |
|------------|------------------------------|-----------------------------------|
| < 1.5 g    | 1.                           | 1.                                |
| > 3 - 4.5g | 1.                           | 1.                                |
| > 4.5 -7 g | 1.                           | 1.                                |
| > 7 g      | 1.                           | 1.                                |
|            |                              | 2.                                |
|            |                              | 3.                                |

**Question 8 (continued)**

- a. List three (3) criteria that must be met in a patient with a venlafaxine overdose for the use of activated charcoal. (3 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

### Question 9 (18 marks)

You have just commenced your morning shift in the emergency department. A nurse asks you to come and see a 50 year old male patient at the request of one of the night registrars who is having difficulty placing a central venous line. The patient requires intravenous access for severe cellulitis that has been resistant to oral antibiotics and the registrar was unable to obtain peripheral IV access. On your arrival, the registrar notes that he was only partially able to insert a right internal jugular catheter and has “lost” the wire in the patient. A chest xray that he has performed confirms that the guide-wire is in the SVC and right atrium.

a. List the five (5) elements of open disclosure. (5 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

**Question 9 (continued)**

- b. Other than open disclosure, list six (6) KEY management steps for this situation. (6 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

- c. List three (3) steps that could be used to determine that a registrar is safe to perform a central venous line unsupervised. (3 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

**Question 9 (continued)**

- d. List four (4) limitations that could be placed on the initial performance of unsupervised insertion of a central venous line. (4 marks)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

University Hospital, Geelong- Fellowship Exam Short Answer Questions  
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**ID NUMBER:**

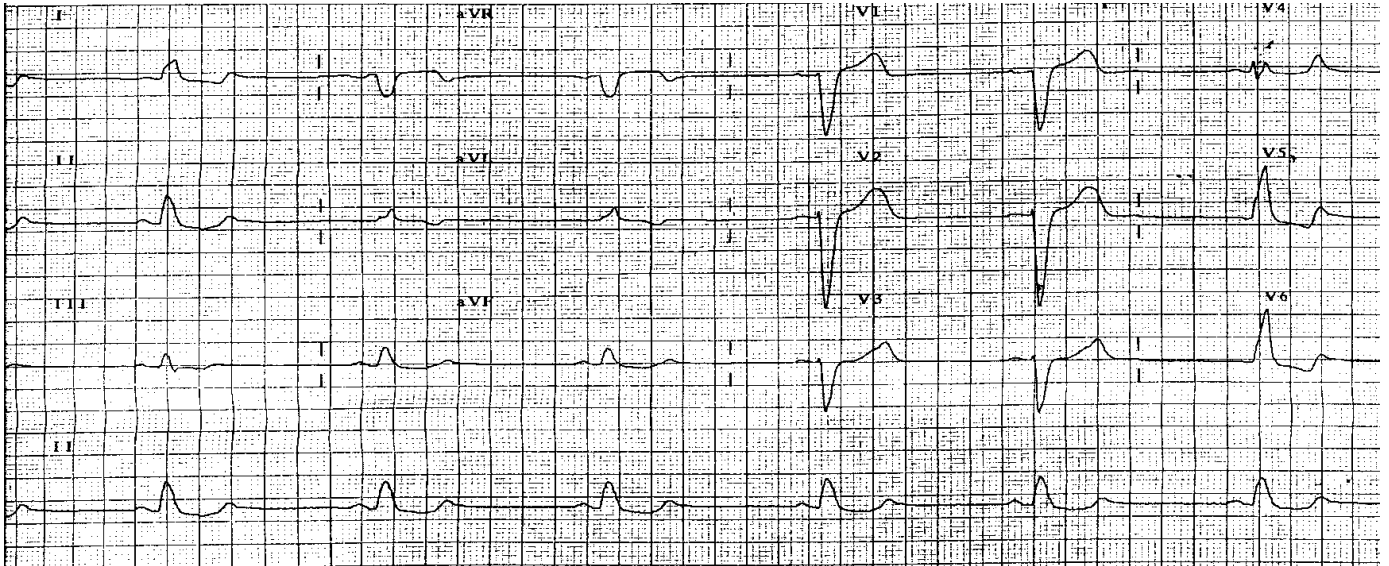
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**Short Answer Questions (SAQ)**  
Week 29

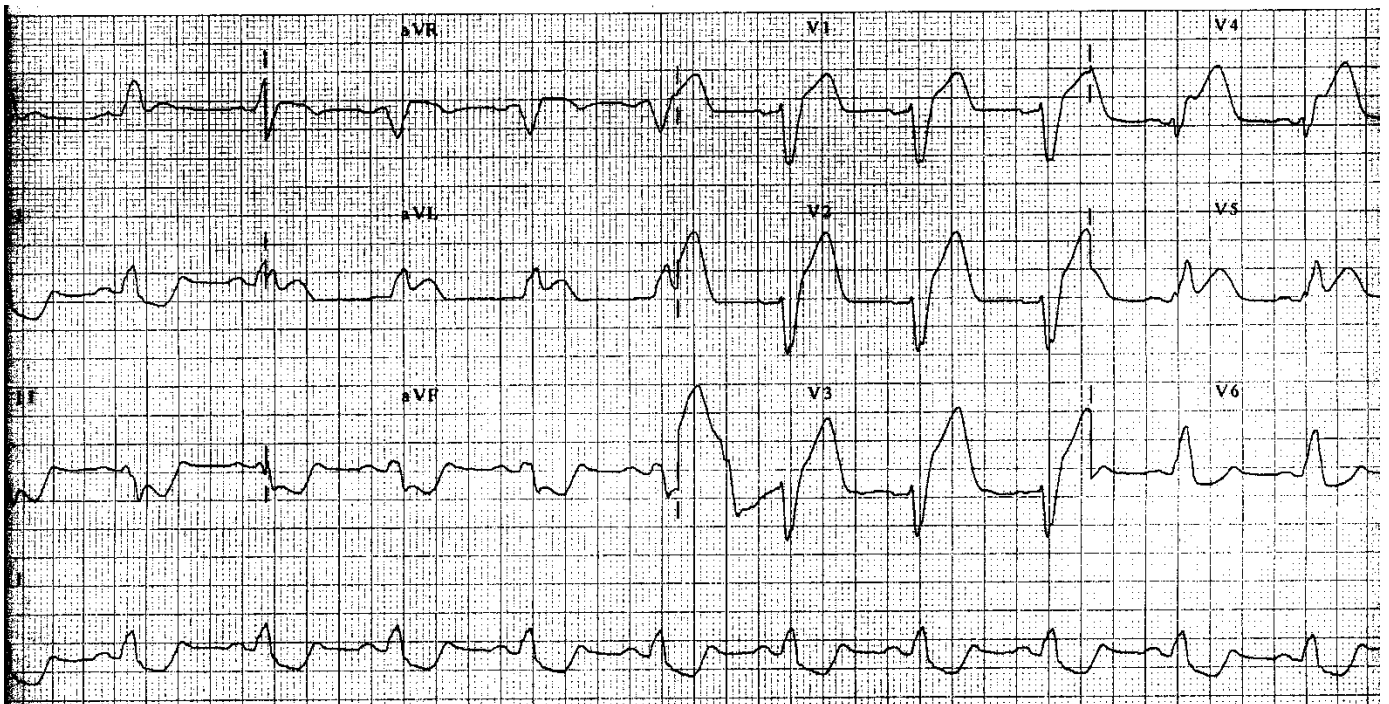
**PROP BOOKLET**

## Question 5

### ECG1 Previous resting ECG

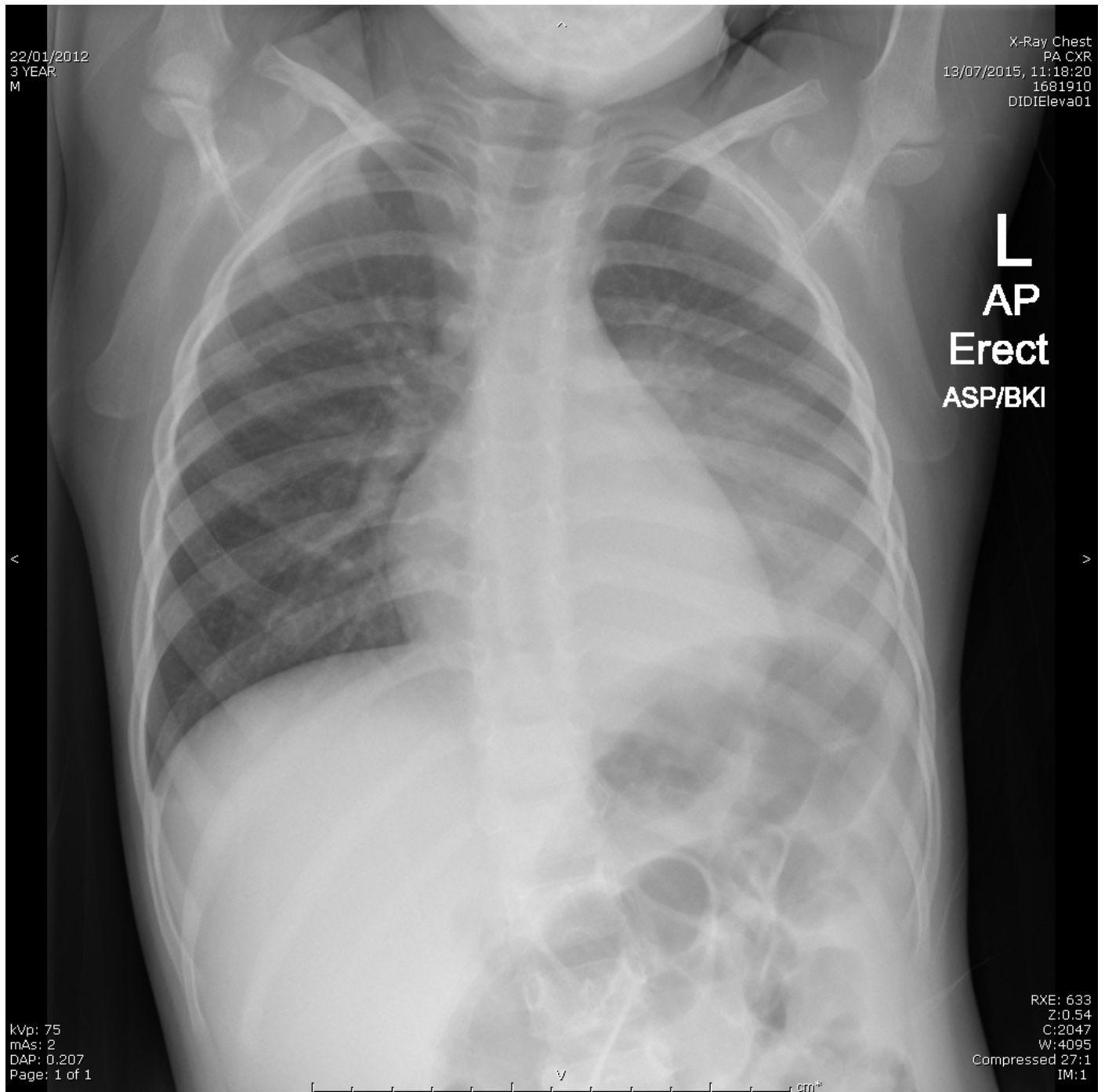


### ECG2 Current ECG with pain





## Question 6



## Question 7

|                           |     |        | Reference Range |
|---------------------------|-----|--------|-----------------|
| FIO <sub>2</sub>          | 0.3 |        |                 |
| pH                        | 6.9 |        | (7.35-7.45)     |
| pCO <sub>2</sub>          | 10  | mmHg   | (37-45)         |
| pO <sub>2</sub>           | 147 | mmHg   | (80-95)         |
| Bicarbonate               | 2   | mmol/L | (22-28)         |
| Base excess               | -30 |        | (-3 - +3)       |
| O <sub>2</sub> saturation | 98  | %      | (> 95)          |
| Lactate                   | 7.1 | mmol/L | (< 1.3)         |
| Na <sup>+</sup>           | 140 | mmol/L | (134-146)       |
| K <sup>+</sup>            | 6.0 | mmol/L | (3.4-5.0)       |
| Cl <sup>-</sup>           | 105 | mmol/L | (98-106)        |
| Creatinine                | 0.1 | mmol/L | (0.06–0.12)     |
| Urea                      | 4.8 | mmol/L | (3.0-8.0)       |
| Glucose                   | 5.2 | mmol/L | (3.5-5.5)       |
| Osmolality                | 360 | mOsm/L | (275–295)       |