

# **University Hospital, Geelong**

# **Emergency Medicine**

# **Trial Fellowship Exam**

# **Short Answer Questions (SAQ)**

# Week 13

#### **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. What is the role of serum procalcitonin levels in the diagnosis of meningitis? State three (3) points in your answer. (3 marks)

1.	
2.	
-	
3.	

#### Question 1 (continued)

A 25 year old presents with a severe headache.

b. Complete the reference table below regarding expected CSF findings. (provide absolute values where clinically important, state increased or decreased in other cases) (10 marks)

	Normal	Bacterial meningitis	Viral meningitis	Fungal (eg Cryptococcal)	Sub arachnoid Haemorrhage
Opening pressure	50- 200 mmH20				
Colour	Clear				
wcc	0- 5				
RBC	0- 5				
CSF Protein	0.2- 0.5				
CSF Glucose	60-80% serum				

# **Question 1 (continued)**

c. List five (5) contraindications to performing a lumbar puncture prior to a CT Brain in the setting of suspected meningitis. (5 marks)

1.	 	 
2.	 	 
3.	 	 
4.	 	 
5.	 	 

## Question 2 (12 marks)

A 2 year old girl presents with a suspected febrile convulsion.

	a.	List six (6) criteria that must be met for the patient to be safely discharged. (6 marks)
1.		
2.		
3.		
J.		
4.		
5.		
6.		

# **Question 2 (continued)**

- b. List six (6) pieces of advice that you would give to the parent on how to deal with a possible future convulsion. Include three (3) indications to call an ambulance.(6 marks)

Three (3) indications to call an ambulance:

1.	
2	
2.	
3.	

#### Question 3 (12 marks)

4. \_\_\_\_

A 23 year old man presents following a fall onto his outstretched right hand from a height of three metres.

#### Wrist xrays are taken- refer to the props booklet- page 1 & 2.

	a.	State four (4) abnormal findings shown in these xrays. (4 marks)
1.		
2.		
۷.		
_		
3.		
4.		
	b.	List four (4) complications of this injury in the first week following injury. (4 marks)
1.		
2.		
3.		

# Question 3 (continued)

A manipulation is to be performed in the emergency department.

c. List two (2) sedative/ analgesic options to facilitate this manipulation. Define the drugs and doses that you would use. He is 70kg. (4 marks)

	Sedative /analgesic option (2 marks)	Drug/ dose (2 marks)
1.		
2		
2.		

#### Question 4 (12 marks)

A 54 year man presents with chest pain. An initial ECG reveals an inferior STEMI. Fifteen minutes after receiving intravenous thrombolysis a further ECG is taken.

#### An ECG is taken in the props booklet- page 3.

His observations are:

BP	150/80	mmHg
Temperature	36	°C
O2 saturation	98%	on room air

## a. State five (5) abnormal findings shown in this ECG. (5 marks)

1.		
2.		
3.		
•		
4.		
4.		
-		
5.		
	b.	What is the significance of this ECG? State three (3) points of significance. (3 marks)
1.		
2.		
۷.		
2		
3.		

## **Question 4 (continued)**

10 minutes after this ECG is taken, his blood pressure drops to 60 mmHg.

c. List four (4) likely causes for this change in blood pressure. (4 marks)

1.	
2.	
3.	
4.	

#### Question 5 (12 marks)

A 59 year old man presented following a motor vehicle accident via ambulance to your regional emergency department.

#### A CT abdomen is taken refer to the props booklet- page 4.

a. State four (4) abnormal findings shown on his CT. (4 marks)

- b. What is the role of hypotensive resuscitation in this patient? State three (3) points in your answer. (3 marks)

#### **Question 5 (continued)**

His CT brain and entire spine CT are reported as normal. His CT Pelvis shows an open book pelvic fracture. After referral to the nearest trauma service, it is decided to transfer the patient via road to the nearest tertiary facility 2 hours away. You are to accompany the patient.

c. Assuming the department has adequate staffing, state five (5) key steps in preparation for the transfer of this patient. (5 marks)

1.	
2.	
3.	
-	
4.	
5.	

#### Question 6 (12 marks)

A 65 year old woman with a history of osteoporosis and depression presents with two weeks of increasing confusion and malaise.

Her observations are:

BP	130/85	mmHg
HR	100	/min
Temperature	36	°C
GCS	13	E4, V4, M5

#### Initial blood results are taken- refer to the props booklet- page 5.

a. Provide one (1) calculation to help you to interpret these results. (1 mark)

Derived value 1: \_\_\_\_\_

b. List three (3) significant abnormal findings in these results. (3 marks)

1.	 	 	
2.	 	 	
3			

#### Question 6 (continued)

c. List four (4) likely differential diagnoses for this presentation. (4 marks)

1.	 
2.	
۷.	 
3.	 
4.	

d. Complete the following table demonstrating two (2) key treatment tasks. How you would achieve each of these tasks? (4 marks)

	Key treatment task (2 marks)	How will you achieve it? (2 marks)
1		
2		

#### Question 7 (12 marks)

A 72 year old man presents with a painful arm for the last 1 week.

#### A photograph of the man is taken- refer to the props booklet- page 6.

a. List four (4) differential diagnoses for this appearance. How you would confirm each diagnosis.? (8 marks)

	Diagnosis (4 marks)	Method of confirmation (4 marks)
1.		
2.		
3.		
4.		

## Question 7 (continued)

b. How would you dress these lesions? State four (4) points of explanation. (4 marks)

1.	 
2.	
2	
5.	 
4.	 

#### Question 8 (12 marks)

A 45 year old man presents unwell after eating mushrooms.

a. What is/ are the usual initial symptoms of toxic mushroom ingestion? (1mark)

- b. Other than accurate species identification, which feature on history most accurately predicts a serious from a benign ingestion. (1 mark)
- c. Which mushroom is associated with the most number of fatal ingestions? (1 mark)

- d. List the two (2) most common life threatening effects of mushroom ingestion. (2 marks)
- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

# Question 8 (continued)

e. List four (4) key management steps in suspected serious mushroom toxicity. (4 marks)

1.	
2.	
3.	
5.	
4.	
ч.	
	List three (2) antidates that may be used in taxis much reactions (2 monto)
	List three (3) antidotes that may be used in toxic mushroom ingestions. (3 marks)
1.	
1.	List three (3) antidotes that may be used in toxic mushroom ingestions. (3 marks)
1. 2.	

#### Question 9 (18 marks)

A 25 year old woman is brought in by ambulance after a T-bone car collision. She was the driver of the car that was hit in the drivers' side at high speed. She is 36 weeks pregnant and is otherwise well. She is complaining of severe abdominal pain only. Her observations:

BP	100/60	mmHg
HR	140	/min
RR	28	/min
O2 saturations	98% o	n room air
Temperature	36.8°C	
GCS	15	

a. How would you assess foetal viability in this patient? List three (3) points. (3 marks)

1	 	 
2.		
-		
3.		

b. State four (4) key treatment principles for this patient. (4 marks)

1.	 	
2.	 	 
3.	 	 
4.		

## **Question 9 (continued)**

The general surgical registrar suggests a "pan scan".

- c. State two (2) possible appropriate arguments for pan scan in this patient. (2 marks)
- - d. State two (2) possible appropriate arguments against pan scan in this patient. (2 marks)
- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

#### **Question 9 (continued)**

#### Monitoring is applied to the patient- refer to the props booklet- page 7.

e. List three (3) pieces of information gained from this monitoring. (3 marks)

1.	
2.	
3.	 

f. In general, list four (4) signs of foetal distress that you may see in this type of monitoring. (4 marks)

1.	 	 	
2.	 	 	
3.			
J.	 	 	
4.	 	 	
4.	 	 	

ID NUMBER:					

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Week 13

**PROP BOOKLET** 

#### **Question 3**

Xray 1 (2<sup>nd</sup> Xray on the next page)



#### **Question 3 continued**

Xray 2





## **Question 5**



## **Question 6**

#### Reference Range

Na <sup>+</sup>	144	mmol/L	134-146	
$K^+$	4.2	mmol/L	3.4-5	
Cl	98	mmol/L	98 - 106	
HCO3 <sup>-</sup>	38	mmol/L	22-32	
Urea	17.2	mmol/L	3-8	
Creatinine	258	micromol/L	45-90	
Glucose	5.4	mmol/L	3.5-5.5	
Calcium	4.47	mmol/L	2.1 - 2.5	
Phosphate	0.92	mmol/L	0.75 - 1.4	
Albumin	40	g/L	35 - 50	

## Question 7



**Question 9** 

