

# Medicine SAQs

Emergency Medicine Fellowship Program



## How to use this book:

### 1) Complete SAQs

- < 3 months until exam: Exam conditions – focus on clear answers ‘to time’
- 3-6 months until exam: Transition towards exam conditions
- > 6 months until exam: Open book is ok, ‘focus on good answers and developing knowledge acquisition

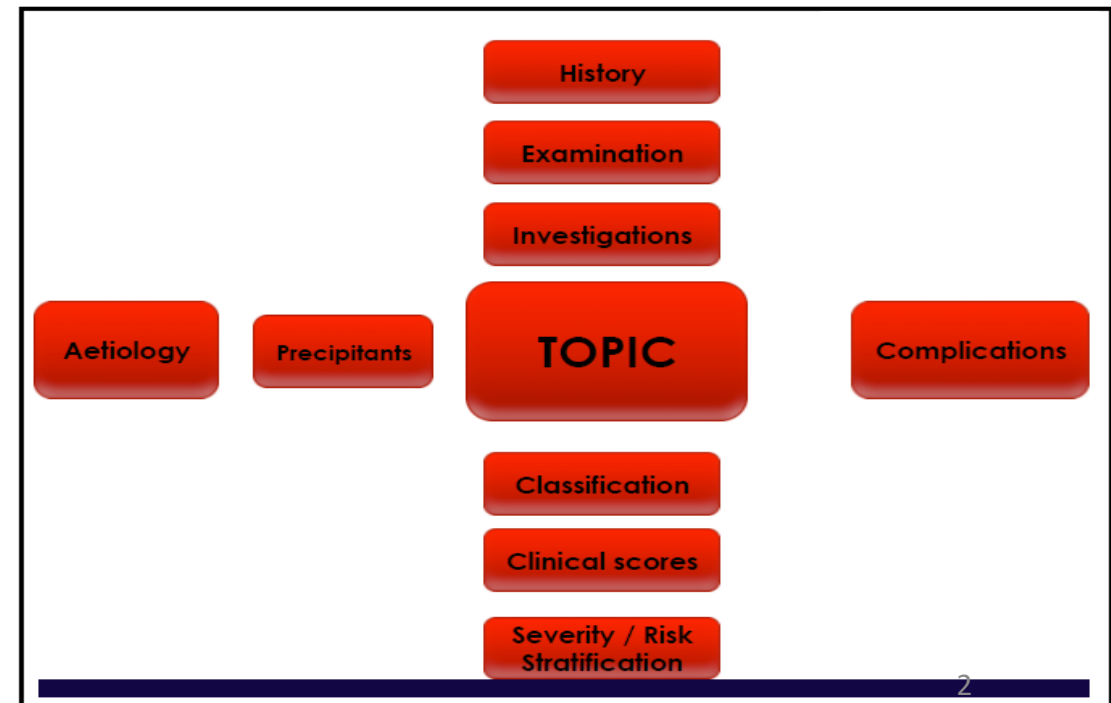
### 2) Read and study around SAQ

- Use each SAQ as motivation to study around the individual topic
- Think about the different ways the topic could come up in the SAQ exam (use the topic structure provided by APEM course)

### 3) Write SAQs to further develop this program

- Review syllabus of medical expertise
- Create SAQs relating to topics not covered in this book, please format to be in exam-format, include answers
- This will help further develop this program as well as help you think like an examiner
- Return to [ben.shepherd86@gmail.com](mailto:ben.shepherd86@gmail.com)

ALL THE BEST!



# Neurological

## 3.4 Neurological

- a) Clinical examination of the neurological system E H
- b) Interpretation of symptoms and clinical signs of the neurological system E H
- c) Disorders of the cranial nerves
  - i) Facial nerve paralysis DIS H
  - ii) Other DIS G
- d) Headache and facial pain
  - i) Pharmacological agents DIS H
  - ii) Indications for imaging (CT, MRI) I H
  - iii) Migraine DIS H
  - iv) Cluster headache DIS H
  - v) Tension headache DIS H
  - vi) Raised intracranial pressure DIS H
  - vii) Temporal arteritis DIS H
  - viii) Neuralgia DIS G
  - ix) TMJ syndrome DIS G
- e) Cerebrovascular accident (CVA)
  - i) Transient ischaemic attacks DIS H
  - ii) RINDS DIS H
  - iii) Thrombotic CVA DIS H
  - iv) Embolic CVA DIS H
  - v) Haemorrhagic CVA DIS H
  - vi) Cerebellar CVA DIS H
  - vii) Thombolysis in CVA M H
  - viii) CVA and hypertension DIS G
  - ix) Syndromes of CVA DIS G
    - i. Anterior cerebral artery DIS G
    - ii. Middle cerebral artery DIS G
    - iii. Posterior inferior cerebellar artery syndrome DIS G
    - iv. Lacunar syndrome DIS G
    - v. Midbrain, pontine and brainstem syndromes DIS G
  - x) Stroke units S G
- f) Altered mental state
  - i) Coma DIS Ex
  - ii) Acute brain syndrome DIS H
  - iii) Dementia DIS G
  - iv) Memory disorders DIS G
- g) Approach to ataxia and gait disturbances DIS G
- h) Seizures DIS H
- i) Status epilepticus DIS Ex
- j) Dystonic reactions DIS H
- k) Lumbar puncture P Ex
- l) Interpretation of CSF fluid biochemistry, cell count and microbiology I H
- m) Infectious disorders of the CNS and PNS
  - i) Meningitis DIS H
  - ii) Encephalitis DIS H
  - iii) Abscess DIS H
  - iv) Tuberculosis DIS G
  - v) Toxoplasmosis DIS G
  - vi) Cryptococcal infection DIS G
  - vii) HIV DIS G
- n) Guillain-Barré syndrome DIS G

- o) Multiple sclerosis DIS H
- p) Myasthenia gravis & Eaton-Lambert syndrome DIS G
- q) Botulism DIS G
- r) Diphtheria DIS G
- s) Tetanus DIS H
- t) Motor neurone disease DIS H
- u) Peripheral neuropathy DIS G
- v) Disorders of the peripheral nervous system
  - i) Peripheral nerve lesions DIS H
  - ii) Brachial plexus syndrome DIS G
- w) Myopathy DIS G
- x) Periodic paralysis DIS H
- y) Parkinson's disease DIS G
- z) Hydrocephalus DIS H
- aa) Complications of the central nervous system devices DIS G
- ab) Disorders of the spinal cord DIS G
- ac) Medical problems in the spinally-injured patient DIS H
- ad) Paraneoplastic disorders of the CNS and PNS DIS G

### COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES

DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents		
E - Physical Examination	P - Procedures	S - Systems	
I - Investigations	Eq - Equipment	NCI - Non-clinical/clinical interface	
M - Medical Interventions	T - Theories		

### COLUMN "LP" – LEVELS OF PRACTICE

Ex - Expert  
H - High  
G - General

An 82 year old woman from a nursing home is sent in by ambulance with increasing confusion and agitation. She is combative and agitated.

1. List five (5) differential diagnostic categories. Give 2 examples of each.

Diagnostic category	Example

2. You decide that her agitation needs management. List two (2) drugs and doses for managing her agitation. List two (2) potential adverse effects for each drug.

Drug	Dose	Adverse effects

3. List three (3) features distinguishing delirium from dementia

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A 50 year old woman presents to the emergency department complaining of dizziness.

1. List your 4 most likely differential diagnoses.

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2. The patient describes true vertigo. List six (6) key features on assessment that differentiate between a peripheral and central cause for her symptoms. Include three (3) historical and three (3) on physical examination.

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3. List three (3) investigations that may be appropriate and justify when you would perform them.

Investigation	When performed

A 65 year old male is brought to your tertiary emergency department with progressively increasing weakness in his legs

1. Outline three (3) key clinical differences between Guillaine Barre syndrome and acute spinal cord compression

Guillian Barre	Acute spinal cord compression

2. On examination the patient has bilateral lower limb weakness with loss of sensation from the nipples down, and absent sphincter tone.  
What is the most likely diagnosis?

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3. List five (5) potential causes for this condition in this patient.

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A 35 year old man presents with 2 weeks of worsening headache and confusion. On examination his observations are as follows:

Temp 38.2 °C  
 HR 60 bpm  
 BP 150/80 mmHg

A CT brain is shown in the prop booklet, page 4.

i. List three (3) abnormal findings on the images provided. (3 marks)

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

ii. List and justify six (6) further investigations.

	Investigation (6 marks)	Justification (6 marks)
1		
2		
3		
4		
5		
6		

iii. Outline four (4) treatment priorities for this patient. (4 marks)

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_



You are the consultant in charge of a tertiary ED with access to a stroke team.  
 A 55 yo male with PMH : HTN, AF, DM and occasional ETOH, presents with **1 hour** history of left facial droop, slurred speech, and visual changes. He has no allergies and his medications are: Warfarin, Ramipril, Amlodipine, Novorapid.  
 His vital signs on arrival are:  
 BP 160/100 mmHg , HR 90 bpm , Sat 99% RA, RR 20/min , temp 36.2  
 You are concerned about a stroke.

1. List three (3) important alternative differential diagnoses that might mimic stroke and how best to exclude these on your initial brief assessment. (6 marks)

	Alternative Diagnosis	How to exclude
1		
2		
3		

You decide to call a 'Stroke Code' and the Stroke Registrar agrees a CT brain with Perfusion study should be ordered. The CT perfusion scan shows reversible ischemia and there is no intracranial haemorrhage. The stroke team would like to thrombolys

2. List four (4) contraindications to thrombolysis that need to be excluded in this patient. (4 marks)

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

3. List five (5) important elements for the process of consent for thrombolysis for this patient? (5 marks)

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



A 59-year-old man presents to the ED via ambulance. He has a history of alcohol abuse and has been noted to have increasing confusion over the preceding 2 days. He was found lying on the floor having a generalised seizure which was terminated by intramuscular midazolam from the ambulance crew.

In the ED his observations are:

GCS 3 (intubated)    BP 170/80    HR 110    O2 sats    95%

His Venous Blood Gas is shown in PROPS booklet ; page 8.

1) What is the acid base abnormality? ( 1 mark)

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2) List three (3) differential diagnosis in this patient for his acid base abnormality? ( 3 marks)

1. 

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2. 

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3. 

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PH	7.19		( 7.32 - 7.42 )
PCO2	41.3	mmHg	( 41 - 51 )
HCO3	15.8	mmol/L	( 20 - 40 )
BE	-11	mmol/L	( -3.0 - +3.0 )
Hb	133	g/L	(120 - 180)
Hct	40.9	%	( 38 - 54 )
Na	105	mmol/L	(135-145 )
K	4.3	mmol/L	( 3.5 - 5.0 )
Cl	77	mmol/L	( 95 - 107 )
Glu	10.7	mmol/L	(3.0 - 10.0)
Lac	6.0	mmol/L	

3) List three (3) potential causes for his hyponatraemia in this patient ( 3 marks)

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

4) List five (5) investigations you would perform in the ED – justify each decision (10 marks)

	Investigation	Justification
1		
2		
3		
4		
5		

While you are assessing the patient in the ED, the patient has a further tonic-clonic seizure.

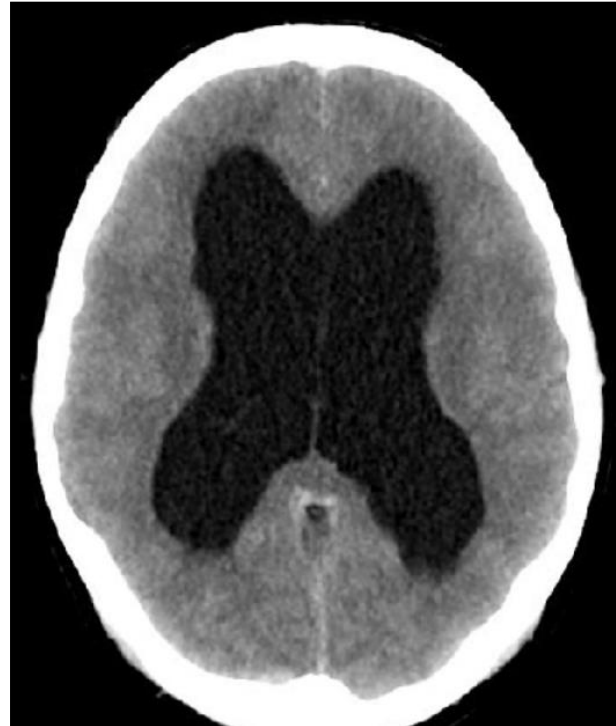
5) List three (3) specific treatments you would consider to treat this seizure, with appropriate doses (6 marks)

	Treatment	Dose
1		
2		
3		

A 36 year old female presented to your tertiary emergency department with severe headache. Whilst one of your registrars is performing a lumbar puncture, the patient experiences a tonic clonic seizure.

a ) List Six (6) potential causes for her seizure (6 marks)

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



A CTB that is subsequently performed is shown in PROPS booklet ;page 9 .

b ) list three (3) congenital and three (3) acquired differential diagnosis for her CT findings ( 6 marks)

	Congenital	Acquired
1		
2		
3		

c ) list three (3) clinical features which mandate CT prior to LP in the setting of headache. (3 marks)

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

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	

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		

**1. List 4 causes of vertigo consistent with a peripheral aetiology. (4 marks)**

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**2. List 4 causes of vertigo consistent with a central aetiology. (4 marks)**

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**3. List 6 examination findings that would be consistent with a central cause for this patient's vertigo. (6 marks)**

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A 32 year old woman is brought to your emergency department from a shopping centre where she had a witnessed collapse. On examination there is no evidence of trauma.

- i. List five (5) critical diagnoses you would consider, with one (1) risk factor and one (1) sign or symptom that would support each of these diagnoses.

	Critical diagnosis	Risk factor	Sign / Symptom
1			
2			
3			
4			
5			

- ii. List and justify three (3) urgent investigations you would do in the emergency department.

	Urgent investigation	Justification
1		
2		
3		

A 29 year old male is brought in by ambulance after a collapse at work. He is a machine operator at a nearby 24 hour factory. Colleagues report he collapsed to the ground whilst working. He was unresponsive and jerking all limbs for a brief period. His level of consciousness has improved on transport to ED.

Vital signs    GCS 15  
                  HR 90 bpm  
                  BP 126/84 mmHg  
                  Temp 37.5 deg C  
                  SaO2 100% (6L/min Hudson)

i. List four possible causes for his collapse (4 marks)

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ii. List four features on history and examination that may suggest that this is a seizure rather than another cause for collapse (4 marks)

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iii. List four reasons why you would order an urgent CT brain (4 marks)

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iv. Describe four considerations in determining that this man is fit for discharge home (4 marks)

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An 18 year old male is brought to your small rural ED by his parents. He had a VP shunt inserted for hydrocephalus at age 10, with the last revision 3 years ago. He has had increasing headache and vomiting for the last two days and is now confused.

Vital signs are:

T 37.3 degrees (per axilla)  
P 114 regular  
BP 140/70  
GCS 14

i. List 5 potential causes for this presentation (5 marks)

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ii. List the initial laboratory investigations you would perform including your rationale (10 marks)

Investigation	Rationale

iii. A CT brain shows marked hydrocephalus. The patient becomes drowsy and has a tonic clonic seizure. Outline your initial five treatment steps (5 marks)

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iv. Despite your treatment, his seizures persist for the next 30 minutes. What five further steps would you take (5 marks)

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A 59 year old man presents with signs suggestive of a left anterior circulation stroke.

- i. Several pathological processes can mimic stroke. Complete the following table listing 5 “stroke mimics” and indicating features of assessment that would help to clarify if the patient has a stroke or a “mimic” (10 marks)

Condition (“mimic”)	Features that suggest mimic versus stroke

- ii. It appears that this patient has a stroke although the non-contrast brain CT is normal. What are the standard inclusion criteria used for stroke fibrinolysis (4 marks)

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- iii. List six exclusion criteria for thrombolysis in stroke (6 marks)

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- iv. The patient’s wife, a Registered Nurse, wants to know about the risks & benefits of lysis for her husband’s stroke. She has heard of the NINDS trial and the “three hour window”. Complete the table below (3 marks)

Likelihood of improvement in functional outcome with lysis	
Risk of symptomatic ICH	
Overall mortality at 3 months	

A 60-year-old lady presents with vertigo.

In column 1, list 4 important diagnoses to consider in any patient that presents with persistent vertigo.

In column 2, list the historical features that would suggest each diagnosis.

In column 3, list the findings on physical examination that would suggest each diagnosis.

Column 1: Diagnosis	Column 2: Historical Features	Column 3: Signs on Examination


A 24-year-old man with a history of hydrocephalus presents with headache, malaise and fever. He has a ventriculoperitoneal shunt.

1. Aside from the peritoneal cavity, list 2 other potential sites for the drainage limb of a ventricular shunt (2 marks).

(1) \_\_\_\_\_

(2) \_\_\_\_\_

2. Apart from infection, list 3 causes of shunt obstruction. (3 marks)

(1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_

3. What is the most commonly cultured micro-organism in CSF shunt infections? (1 mark)

\_\_\_\_\_

4. What is the role of lumbar puncture in a patient with a ventriculoperitoneal shunt? (1 mark)

\_\_\_\_\_

5. What is the diagnosis? (2 marks)

\_\_\_\_\_

\_\_\_\_\_



An elderly female presents to the ED after being found on the floor of her bathroom. Her family found her lying on her left side.

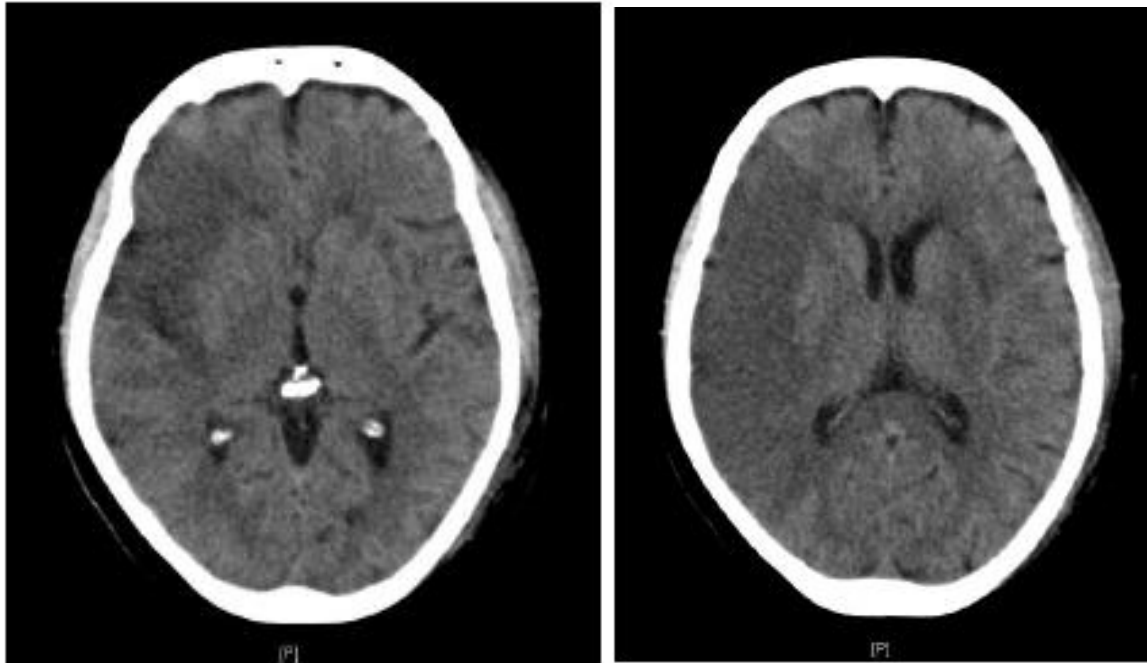
On arrival to ED:

GCS 10

HR 85

BP 140/90

Brain CT, axial images



1. Describe the brain CT findings (1 mark).

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2. List 3 clinical signs that would be expected based on the CT brain findings (3 marks).

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

3. What would be your management priorities? (4 marks)

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4. List 2 features on CT brain that are associated with a poor outcome from thrombolytic therapy (2 marks).

- i. \_\_\_\_\_
- ii. \_\_\_\_\_

A 68-year old female presents to the ED following a brief syncopal event at church. She is now asymptomatic.

1. List 5 features on history that would suggest a specific cause of syncope (5 marks).

	Historical Feature	Possible Diagnosis
1.		
2.		
3.		
4.		
5.		

2. List 5 physical signs that you would examine for (2.5 marks).

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
- v. \_\_\_\_\_

3. List and justify 5 investigations for this patient (2.5 marks)

	Investigation	Justification
1.		
2.		
3.		
4.		
5.		

i. List the clinical features of an isolated 7<sup>th</sup> nerve palsy due to a peripheral lesion (3 marks)

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ii. List 5 potential causes of an isolated 7<sup>th</sup> nerve palsy due to a peripheral lesion (5 marks)

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iii. What treatment should be advised in idiopathic Bell's palsy (2 marks)

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iv. What is the prognosis for recovery from idiopathic Bell's Palsy (2 marks)

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v. What factors are associated with a poorer outcome (2 marks)

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A 47yo Caucasian male who has a prior hypoxic brain injury (secondary to anaphylaxis) complicated by seizures. He is brought to your department with an ongoing generalized seizure despite having had 15mg (0.2mg/kg) of midazolam en-route. His BGL is 12.0mmol/L. No trauma. No other comorbidities.

- Assuming that there are no drug allergies, in the table below sequence the next four medications that you would use to control this seizure

Medication	Immediate potential complications

- Record the immediate complications that you would anticipate with using these medications

A 42 year old man has been found outside your emergency department fitting. He is dishevelled and smells strongly of alcohol.

- a) Name 4 possible underlying causes of this patient's presentation and how you would clinically prove/disprove the presence of each (6 marks)

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- b) Outline steps you could take to gather collateral information to aid in your assessment of this patient. (4 marks)

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### 3.2 Respiratory

- a) Clinical examination of the respiratory system E H
- b) Interpretation of symptoms and clinical signs of the signs of the respiratory system E Ex
- c) Respiratory failure DIS H
- d) Upper airway obstruction DIS Ex
- e) Infectious diseases
  - i) Croup DIS H
  - ii) Bronchitis DIS H
  - iii) Pneumonia DIS H
  - iv) Empyema DIS H
- f) Aspiration DIS H
- g) Acute lung injury/respiratory distress syndrome DIS H
- h) Asthma DIS Ex
- i) Pneumothorax DIS Ex
- j) Intercostal catheter insertion P Ex
- k) Pneumomediastinum DIS H
- l) Chronic obstructive pulmonary disease DIS H
- m) Pleural effusions DIS H
- n) Needle thoracocentesis P H
- o) Haemoptysis DIS H
- p) Cavitating lung lesions DIS G
- q) Isolated "coin" lesions on chest x-ray DIS G
- r) Disorders of the chest wall DIS G
- s) Disorders of the mediastinum DIS G
- t) The respiratory effects of obesity DIS G
- u) Sleep apnoea DIS G
- v) Lung transplants DIS G
- w) Neoplastic disorders DIS G
- x) Congenital/neonatal
  - i) Bronchopulmonary dysplasia DIS G
  - ii) Cystic fibrosis DIS G

# Respiratory & Thoracic Surgery

### 4.4 Thoracic

- a) Spontaneous pneumothorax DIS Ex
- b) Pneumomediastinum DIS H
- c) Mediastinitis DIS H
- d) Oesophageal perforation DIS H
- e) Mediastinal masses DIS G
- f) Oesophageal foreign body DIS H
- g) Tracheobronchial foreign body DIS H
- h) Congenital
  - i) Diaphragmatic hernia DIS G
  - ii) Oesophageal DIS G
  - iii) Tracheobronchial DIS G
  - iv) Vascular ring DIS G

#### COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES

DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents		
E - Physical Examination	P - Procedures	S - Systems	
I - Investigations	Eq - Equipment	NCI - Non-clinical/clinical interface	
M - Medical Interventions	T - Theories		

#### COLUMN "LP" – LEVELS OF PRACTICE

Ex - Expert  
H - High  
G - General

A 33 yo man presents with 5 days of worsening cough & dyspnoea. His GP has confirmed a diagnosis of influenza B, 7 days ago.

His vital signs on arrival:

BP	110/70	mmHg
HR	115	bpm
RR	30	bpm
O2 sat	88%	RA
temp	39	deg Celcius

His CXRs are shown in **PROPS BOOKLET, PAGE 5**.

a) List three (3) abnormalities on the images provided. (3 marks)

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

b) List three (3) strategies to improve his respiratory status. For each strategy state one (1) explanation/rationale for its use. (6 marks)

	Strategy	Explanation/rationale
1		
2		
3		

d) List two (2) organisms most likely involved in this complication. (2 marks)

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



An 80 year old lady from home presents with sudden onset of shortness of breath and right sided pleuritic chest pain.

Her observations are as follows:

Temperature	37.5	°C
HR	120	/min
BP	90/60	mmHg
RR	30	/min
O <sub>2</sub> Saturations	92%	on 10L O <sub>2</sub> via Hudson mask

Her CXR is normal. You suspect a pulmonary embolism.

1. What is the utility of a d-dimer this this patient?

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2. Discuss three (3) possible radiological investigations for this patient. Include two (2) pros and two (2) cons for each.

Investigation	Pros	Cons

3. The use of thrombolysis in PE is controversial. List 3 possible indications for thrombolysis in PE.

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A 50 year old woman has presented after 2 weeks of lethargy, dyspnoea and pleuritic chest pain. She is now short of breath. Her observations are as follows:

Temp	36.8	°C
BP	80/60	mmHg

An ECG is taken.

The ECG is shown in the prop booklet supplied - page 8.

i. What is the cause of her hypotension?

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ii. List four (4) positive ECG findings that support your diagnosis.

1 

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2 

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3 

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4 

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iii. Describe five (5) abnormalities that you could expect to see on a focused ultrasound scan of her heart.

1 

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2 

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3 

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4 

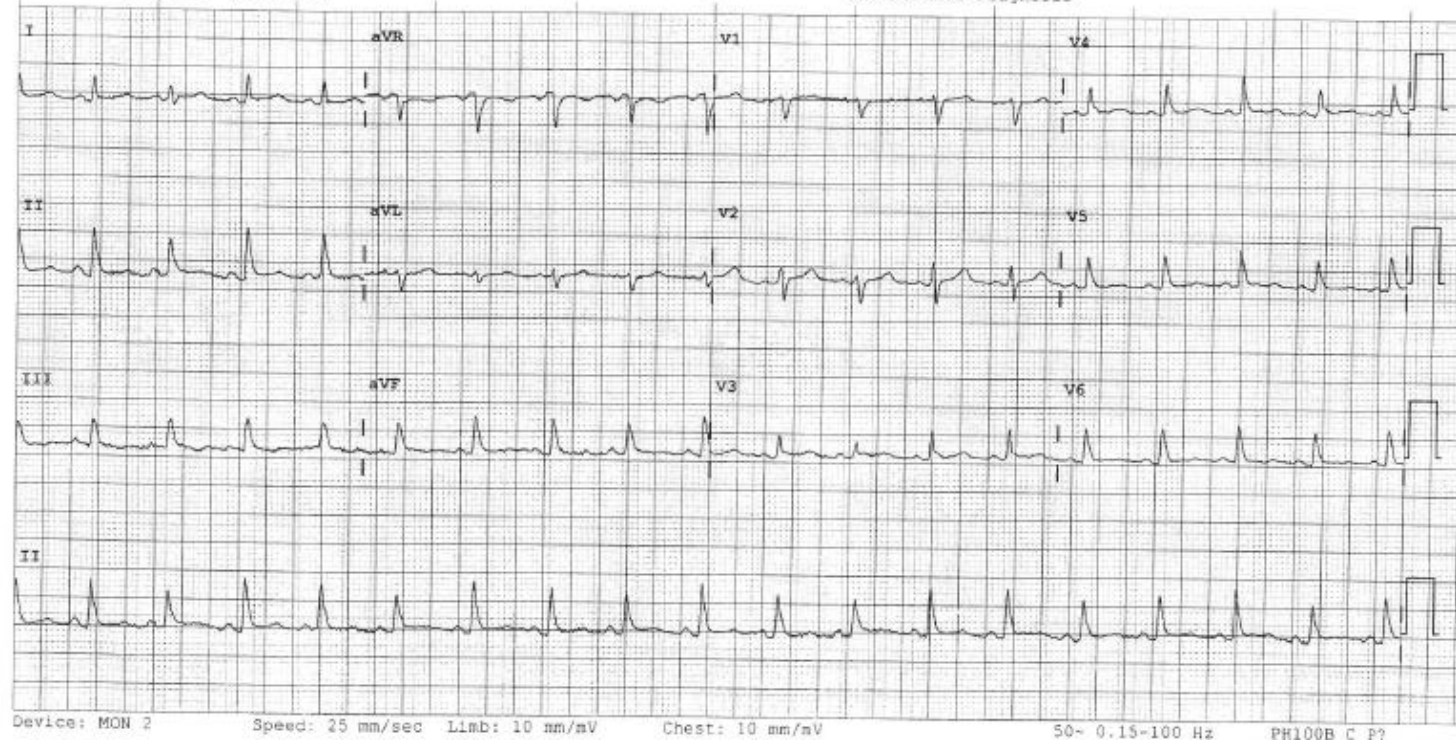
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12 Lead ECG Report (Standard)

Unconfirmed Diagnosis



iv. Outline four (4) interventions that would be likely to improve her cardiac output.

1 

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2 

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3 

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4 

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A 30 year old male presents with sudden onset of right sided chest pain and shortness of breath. There is no history of trauma.

A CXR is ordered at triage.

The CXR is shown in the prop booklet supplied - page 10.

i. Describe one (1) relevant positive finding on the CXR in detail.

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ii. Describe two (2) relevant negative findings on the CXR.

1 \_\_\_\_\_

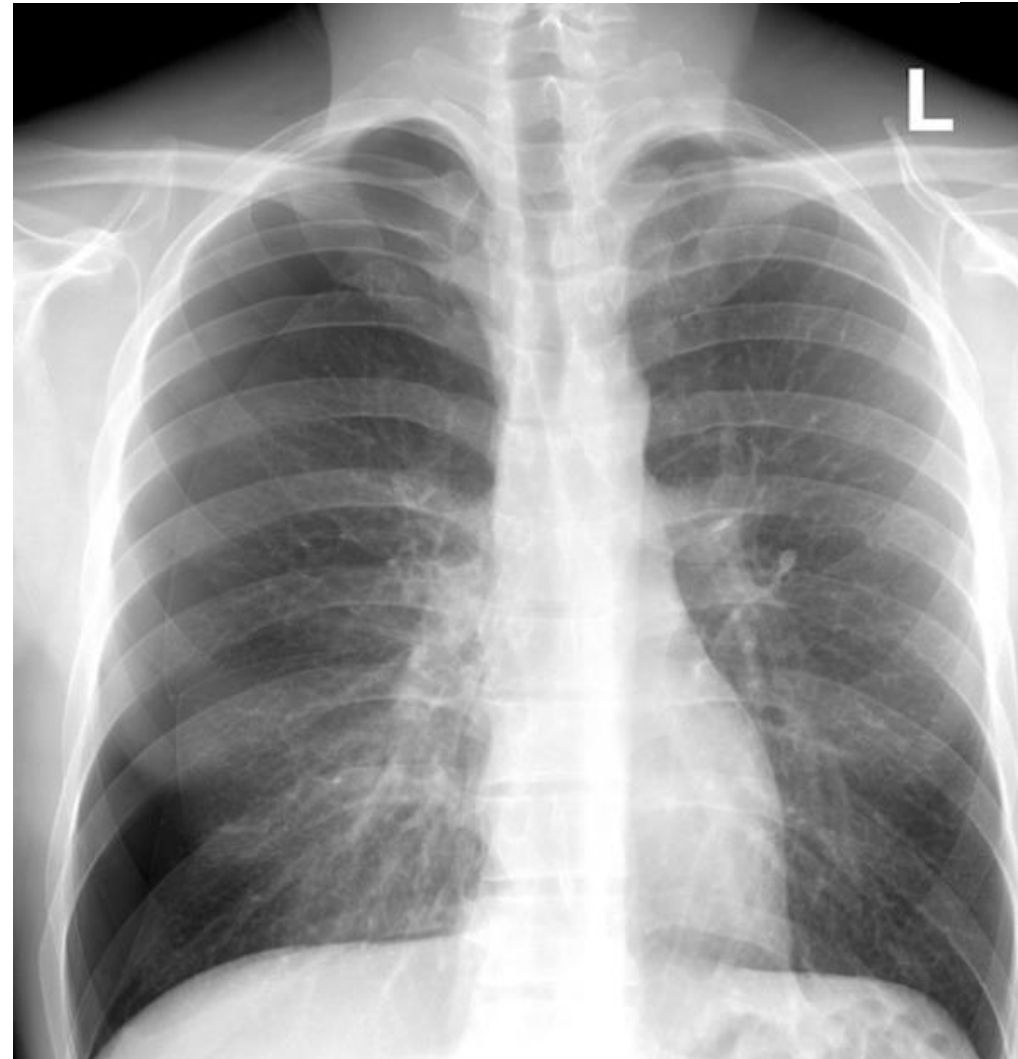
2 \_\_\_\_\_

iii. List three (3) possible specific treatments for the condition shown on the CXR and provide two (2) pros and two (2) cons for each.

Treatment 1:	
Pros	Cons

Treatment 2:	
Pros	Cons

Treatment 3:	
Pros	Cons



iv. List three (3) different approaches to analgesia with one (1) pro and one (1) con for each

Approach to analgesia 1:	
Pro	Con

Approach to analgesia 2:	
Pro	Con

Approach to analgesia 3:	
Pro	Con



A 60 year old female presents with left sided chest pain and shortness of breath.

A CXR - (AP and lateral) is taken. They are shown on pages 11 and 12 of the props booklet.

i. List three (3) positive and two (2) negative findings on the CXR. (5 marks)

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

5 \_\_\_\_\_

ii. Give three (3) relevant details about the major abnormality. (3 marks)

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

iii. List three (3) differential diagnoses. (3 marks)

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_





iv. List and justify four (4) investigations you would perform on the day of her presentation. (8 marks)

	Investigation (4 marks)	Justification (4 marks)
1		
2		
3		
4		

A 41 year old woman with PMH: social smoking, previous DVT, recent cholecystectomy (3 weeks prior) ; presents with 2 day history of pleuritic chest pain, cough, and dyspnea. Her vital signs on arrival are:

HR 90 bpm ; Sats 94% RA  
BP 115/75 mmHg ; RR 28 /min ; Temp 37.6 °C

Her history and examination is otherwise unremarkable. She has no allergies.

1. You decide she needs a definitive imaging to rule out PE. What is your first choice of imaging? State your justification for this choice. (2 marks)

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2. While waiting for her imaging, she becomes more unwell and acutely SOB with associated dizziness.

Her new Vitals are:

HR 130 bpm ; Sats 86% RA  
BP 80/60 mmHg ; RR 35 /min ; Temp 37.1 °C

a) List six (6) criteria for safe transfer to definitive imaging? (6 marks)

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

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

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

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

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

6. \_\_\_\_\_

b) If these criteria are not met, how will you definitively diagnose PE? (2 marks)

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4. She is stabilised with the above management and imaging is gained which supports the diagnosis of pulmonary embolism.

The ED Registrar assisting you asks whether the patient should be thrombolysed. List six (6) main factors that will influence this decision. (6 marks)

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

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

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

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

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

6. \_\_\_\_\_

A 68 year old lady presents with 3 days of fever, cough and dyspnoea.  
Her CXR is shown in PROPS booklet;Page 11

1) List three (3) abnormal findings on her CXR (3 marks)

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

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

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

2) What is your diagnosis? (1 mark)

\_\_\_\_\_

3) List six (6) positive criteria predicting the need to consider ICU referral (6 marks)

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

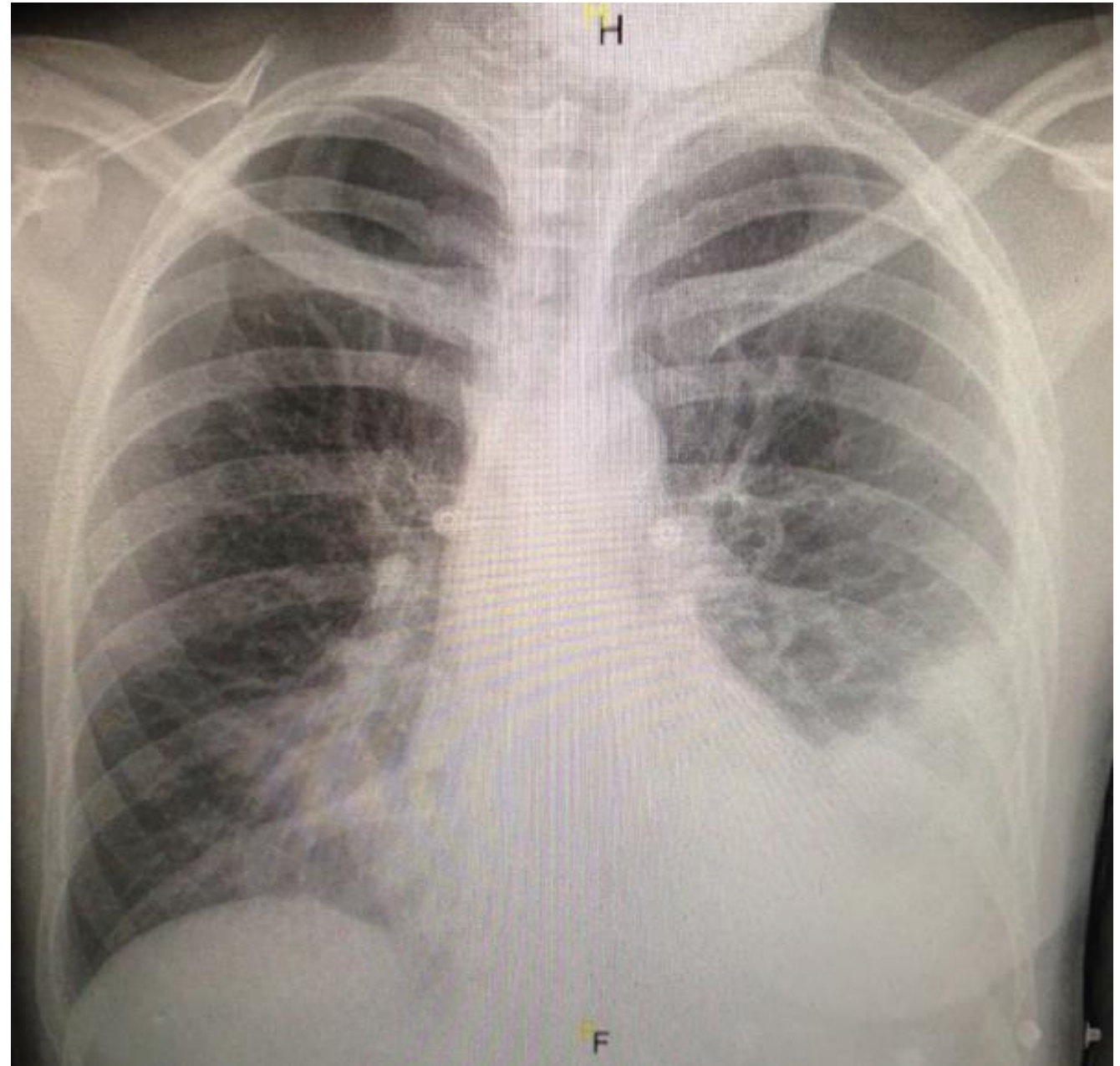
2. \_\_\_\_\_

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

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

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

6. \_\_\_\_\_



4) She requires ICU admission. state her antimicrobial treatment as per your local practice below, including organisms(s) treated. She has no allergies (6 marks)

	Medication	Dose,Route,frequency	Organism
1			
2			

A 24 year old woman with a history of asthma presents with dyspnoea, dizziness and pleuritic chest pain for 24 hours. She appears tired, her pulse is 135bpm, and has mottled peripheries. A CXR is performed in the resuscitation room.

**THE CHEST XRAY IS SHOWN IN THE PROPS BOOKLET, PAGE 13**

i. List 3 positive and 2 negative findings on the CXR (5 marks)

Positive

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Negative

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ii. List 4 immediate management steps (4 marks)

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iii. List 4 complications of definitive treatment of this problem (4 marks)

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A obese but otherwise healthy 30 year old woman is brought to your emergency department suffering from shortness of breath after a 3 day viral prodrome. Her vital signs are:

HR 125 bpm  
BP 80/60  
RR 34

Temp 38.0 °C  
Sats 85% on 8 L/min O<sub>2</sub>

The patient's CXR is shown on the next page.

a. Describe the patient's CXR (1 Mark)

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b. List 4 differentials for the patient's presentation and CXR findings (4 Marks)

1. 

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2. 

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3. 

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4. 

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c. Outline your management (5 Marks)

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A 75 yr old male presents to your Emergency Department complaining of progressive shortness of breath over 2 weeks.

a. Describe the patient's x-ray (2 Marks)

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b. List 4 criteria for categorising a pleural effusion as an exudate ( 4 Marks)

1. 

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2. 

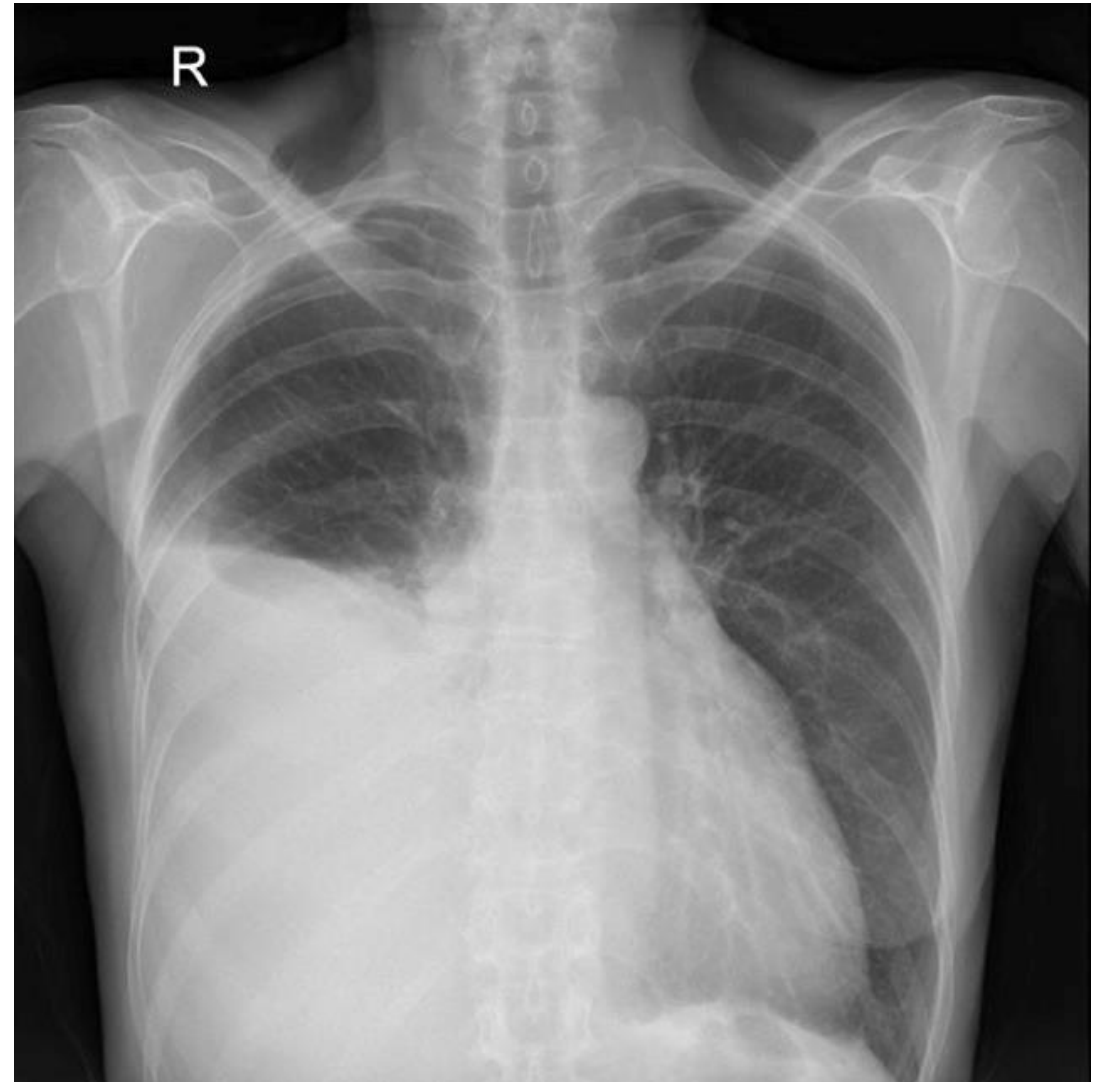
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3. 

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4. 

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c. List 4 causes of pleural transudates ( 2 Marks)

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

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

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

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

d. List 4 causes of pleural exudates ( 2 Marks)

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

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

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

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

A 30-year-old Nepalese man presents with fever and confusion. He is noted to have dullness to percussion on his right lung base. His CxR is attached:

\*See image on page 14 in separate book\*

You do a pleural tap.

1. List five investigations you would order on the pleural fluid and justify your responses. (4 marks)

Investigation	Justification

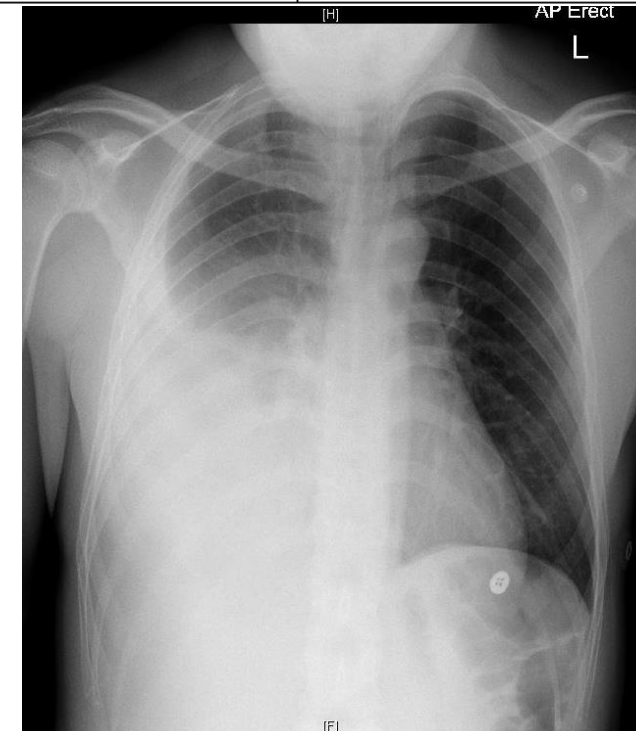
2. List 2 biochemical features that differentiate a transudate from an exudate. (2 marks)

(1) \_\_\_\_\_

(2) \_\_\_\_\_

3. Name 3 common causes of transudates and 3 common causes of exudates that cause pleural effusions. (3 marks)

Transudate	Exudate



A 24 yr old female presents to your Emergency Department with a pneumothorax.

a. Complete the following table listing 5 treatment options, their indication and give an advantage and disadvantage for each option (10 Marks)

	<b>Treatment Option</b>	<b>Indication</b>	<b>Advantage</b>	<b>Disadvantage</b>
1.				
2.				
3.				
4.				
5.				

A 60 year old female with a past history of SLE presents to the ED with dyspnoea. After initial assessment you are suspicious of alveolar haemorrhage.

a) List two (2) features (excluding dyspnea) in her history supportive of the diagnosis (2 marks).

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

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

b) List Two (2) diagnostic investigations with one justification for each (4 marks).

	Investigation	Justification
1		
2		

c) Complete the following table listing organ systems and common conditions associated with SLE. (6 marks)

Organ / system	Condition
CVS	1
	2
Renal	1
	2
GIT or Ocular	1
	2

A patient presents to your ED with marked SOB and hypoxia.

i. List 4 relevant findings on the chest Xray (4 marks)

**A CHEST X-RAY IS SHOWN IN THE PROPS BOOKLET, PAGE 11**

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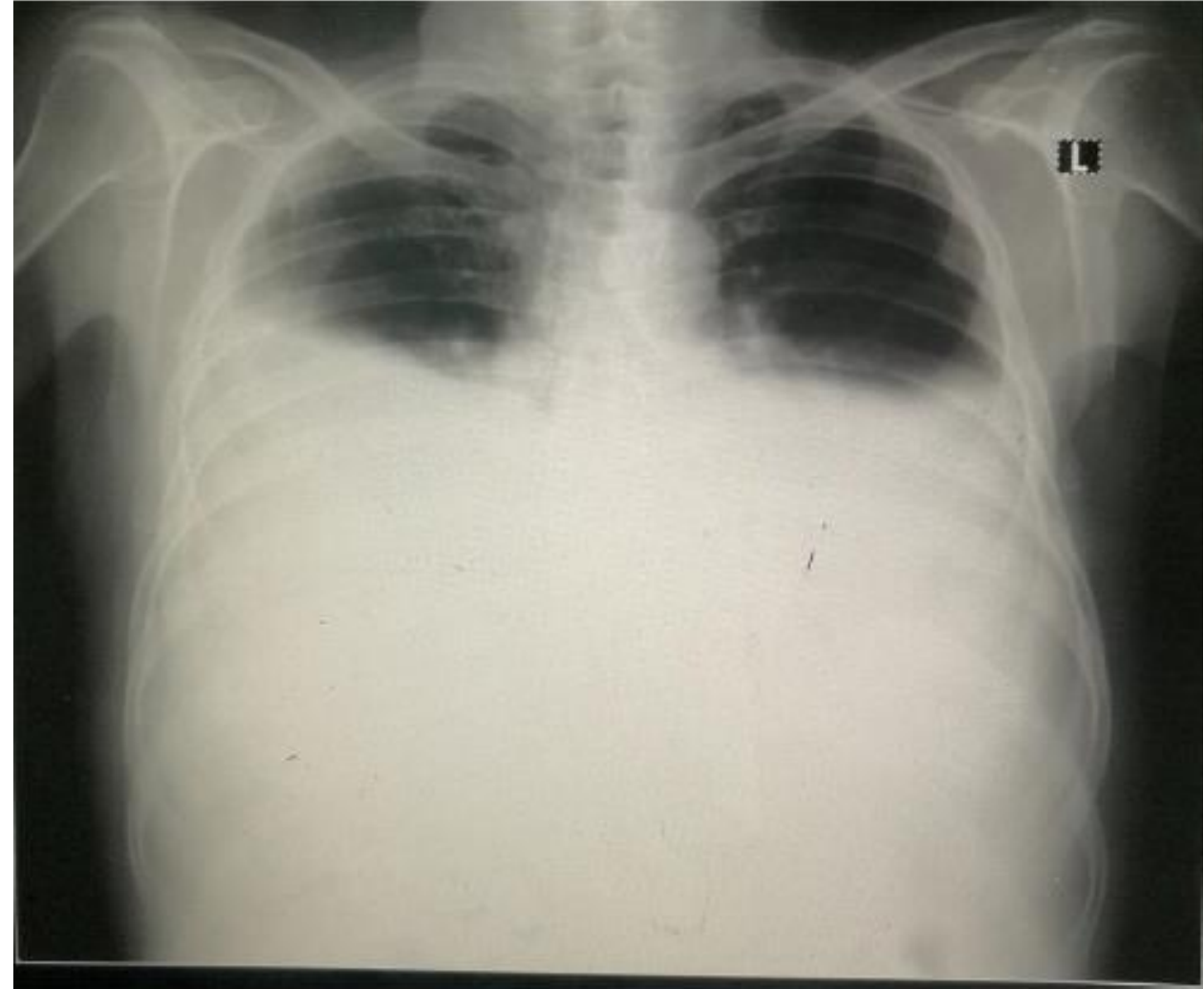
ii. List 4 potential underlying pathologies (4 marks)

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A pleural aspirate is performed.

Fluid Protein	48 g/L	
Serum protein	62 g/L	(60-78)
Fluid LDH	120 U/L	
Serum LDH	148 U/L	(60-160)
Glucose	1.9 mmol/L	

iii. What type of effusion is this and why (1 mark) and what are the 2 most likely differential diagnoses (3 marks)

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iv. List 4 further relevant investigations (4 marks)

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A 78 year old man has been brought to the hospital by ambulance with severe shortness of breath.

He has had 2 days of fever and productive cough.

His chest x-ray is shown in the **PROPS BOOKLET**.

1. List 6 radiological abnormalities.

(6 marks)

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2. List your 2 most likely provisional diagnoses from the available information. (2 marks)

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His vital signs are:

GCS	13	E3 V4 M6
Temp	38.9	degrees
Pulse	120	/min
BP	88/45	mmHg
O2 sats	88%	10L O2 via Hudson mask

3. State your 3 most important initial treatment measures.

(3 marks)

- 1) \_\_\_\_\_  
\_\_\_\_\_
- 2) \_\_\_\_\_  
\_\_\_\_\_
- 3) \_\_\_\_\_  
\_\_\_\_\_

4. List 7 factors you would consider in determining the ceiling of care for this patient.

(7 marks)

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A 54 year old woman presents to your tertiary ED with a 24 hour history of haemoptysis, getting worse in the last 4 hours. She has no known history of systemic illness and is on no medications. On arrival she is coughing up 5-10 ml of bright red blood every 10 mins.

i. List the key components of your assessment (8 marks)

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ii. List 5 causes of massive haemoptysis (5 marks)

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While in the resus room, she suddenly starts to cough up larger volumes of blood, now around 50 ml every 5 minutes.

iii. List 7 key interventions to perform since this increase in haemoptysis (7 marks)

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A 35 year old female presents to your Emergency Department with an acute asthma attack. She is highly distressed and only speaking single words despite continuous salbutamol nebs.

Despite intensive therapy, and a period of non-invasive ventilation, the patient continues to deteriorate, appears exhausted and begins to tire rapidly. You decide intubation is required.

i. List 4 markers of severe asthma (4 marks)

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iii. Outline what your initial ventilator settings (4 marks)

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ii. Complete the table below regarding the use of intravenous salbutamol and magnesium sulfate in asthma (8 marks)

iv. List likely causes of climbing airway pressures in a ventilated asthmatic (4 marks)

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	Indication and rationale	Adverse Effects
Intravenous salbutamol		
Magnesium		

A 24 year old women who is 10 weeks pregnant presents with suspected pulmonary embolus.

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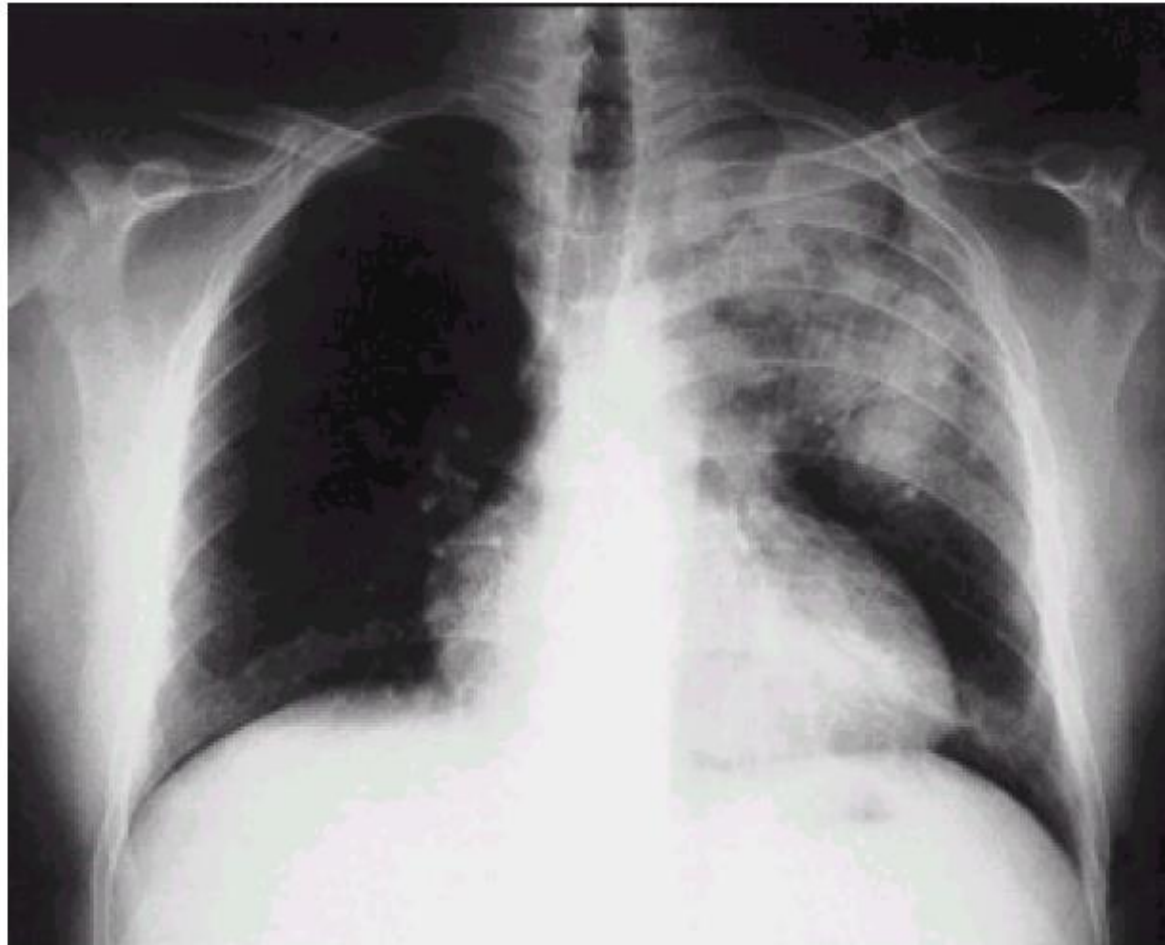
a. List five clinical features that would increase her likelihood of having PE. (5 marks)

b. Describe the utility of the following investigations in this patient. (5 marks)

	Investigation	Utility
1	D Dimer	
2	CXR	
3	Lower limb US	
4	CTPA	
5	VQ	

A 35 year old male attends your department. His partner is HIV positive and is currently being treated for pulmonary Tuberculosis. The results of a blood gas performed on 15 L/min O<sub>2</sub> via mask and his CXR are shown below.

pH 7.44  
pCO<sub>2</sub> 30mmHg  
pO<sub>2</sub> 124mmHg  
Bicarb 22 mmol/L  
B.E. -1



a) List the concerning features of the CXR. (2 marks)

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b) Excluding TB give 2 differentials diagnoses of this presentation. (2 Marks)

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c) Detail the top 3 management priorities for this patient in the emergency department. (6 marks)

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# Endocrine / Renal / Metabolic

## 3.5 Endocrine

- a) Clinical examination of the endocrine system E H
- b) Interpretation of symptoms and clinical signs of the endocrine system E H
- c) Hypoglycaemia DIS Ex
- d) Diabetic ketoacidosis DIS Ex
- e) Diabetic with unstable blood glucose DIS H
- f) Alcoholic ketoacidosis DIS H
- g) Hyperosmolar hyperglycaemic nonketotic syndrome DIS Ex
- h) Adrenal disorders
  - i) Acute adrenal insufficiency (adrenal crisis) DIS H
  - ii) Congenital adrenal insufficiency DIS G
  - iii) Cushing's disease DIS G
  - iv) Conn's syndrome DIS G
  - v) Pheochromocytoma DIS G
- i) Thyroid disorders
  - i) Urgencies associated with thyroid disorders DIS H
  - ii) Thyroid storm DIS H
  - iii) Hypothyroid crisis DIS H
- j) Pituitary disorders DIS G
  - i) Panhypopituitarism DIS G
  - k) Parathyroid disorders DIS G

## 3.8 Renal

- a) Clinical examination of the renal system E H
- b) Interpretation of symptoms and clinical signs of the renal system E G
- c) Pyuria I H
- d) Interpretation of urine dipstick results I H
- e) Interpretation of urine microscopy and culture I H
- f) Infectious disorders
  - i) UTI DIS H
  - ii) Prostatitis DIS H
  - iii) Pyelonephritis DIS H
  - iv) Infected obstructed kidney DIS H
- g) Acute renal failure DIS H
- h) Chronic renal failure DIS G
- i) Hyperkalaemia in renal failure DIS Ex
- j) Renal dialysis
  - i) Peritoneal M G
  - ii) Intermittent haemodialysis M G
  - iii) Continual renal replacement therapies M G
  - iv) Complications of renal dialysis M G
- k) Renal transplant DIS G
- l) Haemolytic uremic syndrome DIS G
- m) Rhabdomyolysis DIS H
- n) Polycystic kidney disease DIS G

## 3.13 Metabolic

- a) Volumes and composition of the
  - i) Total body water T H
  - ii) Intracellular fluid T H
  - iii) Extracellular fluid T H
  - iv) Plasma T H
  - v) Blood T H
- b) Electrolytes
  - i) Hypokalaemia DIS/I Ex
  - ii) Hyperkalaemia DIS/I Ex
  - iii) Hyponatraemia DIS/ I Ex
  - iv) Hypernatraemia DIS/I Ex
  - v) Hypocalcaemia DIS/I G
  - vi) Hypercalcaemia DIS/I G
  - vii) Hypermagnesaemia DIS/I G
  - viii) Hypomagnesaemia DIS/I H
  - ix) Hyperphosphataemia DIS/I G
  - x) Hypochloraemia DIS/I H
  - xi) Hyperchloraemia DIS/I H
  - xii) Inappropriate ADH syndrome DIS/I H
  - xiii) Interpretation of the electrocardiograph in electrolyte disturbance I Ex

### COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES

DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents		
E - Physical Examination	P - Procedures	S - Systems	
I - Investigations	Eq - Equipment	NCI - Non-clinical/clinical interface	
M - Medical Interventions	T - Theories		

### COLUMN "LP" – LEVELS OF PRACTICE

Ex - Expert  
H - High  
G - General

A 42-year-old man is brought to your ED by ambulance with acute confusion. His health has been deteriorating for three months, with tiredness & 10kg weight loss despite an enormous appetite. He is on no medications.

Observations on arrival are:

HR 140

BP 180/100

RR 40

SaO<sub>2</sub> 100%

GCS 13

Temp 38.5

BSL 10

i. List the most likely diagnosis (1 mark)

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ii. List 4 differential diagnoses (4 marks)

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iii. List 4 problems that may precipitate the most likely diagnosis (4 marks)

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iv. List 5 treatment priorities in ED (5 marks)

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

Vital signs on arrival:

GCS 13  
HR 100 bpm  
BP 130/85  
Temp 36°C

Her blood results are below:

			Reference Range
Na <sup>+</sup>	144	mmol/L	134-146
K <sup>+</sup>	4.2	mmol/L	3.4-5
Cl <sup>-</sup>	98	mmol/L	98 - 106
HCO <sub>3</sub> <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

a. List 3 key abnormalities on this patient's blood results (3 Marks)

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

b. List 3 potential causes of the patient's hypercalcaemia (3 Marks)

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

c. Outline key steps in the management of hypercalcaemia (4 Marks)

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

A 48 year old woman with a history of thyrotoxicosis presents with fever and confusion.

You are concerned she may have thyroid storm.

1. What are 3 diagnostic criteria for thyroid storm? (3 marks).

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_

2. What factors may have precipitated this episode? Give 6 examples (3 marks).

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
- v. \_\_\_\_\_
- vi. \_\_\_\_\_

3. Describe 4 specific treatments for thyroid storm and their mechanism of action (4 marks)

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_



A normally well 24 year old man is brought to your ED with increasing confusion and a seizure. A blood gas shows the following.

pH	7.31		
PCO <sub>2</sub>	51	mmHg	(35-45)
HCO <sub>3</sub>	22	mmol/L	(22-28)
Na	109	mmol/L	(135-145)
K	4.1	mmol/L	(3.5-4.2)
Cl	91	mmol/L	(95-110)
Glucose	10	mmol/L	(3.9-5.8)

i. Detail the specific emergency treatment required and provide treatment aims/endpoints (3 marks)

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ii. List 3 risk factors for the development of Osmotic Demyelination Syndrome (ODS) and write brief explanatory notes (6 marks)

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iii. Hypertonic saline is also used in the management of raised intracranial pressure in traumatic brain injury (TBI). What dose/regime would you use and what target endpoints would guide your therapy (4 marks)

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iv. Briefly outline the advantages/disadvantages of hypertonic saline versus mannitol in TBI (3 marks)

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i. List 3 key ECG features of significant HYPOkalaemia (3 marks)

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ii. List 3 key ECG features of significant HYPERkalaemia (3 marks)

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iii. List 3 treatment options for acute severe hyperkalaemia. For each, describe its mechanism of action and time course (9 marks)

Treatment/Dose	Mechanism of Action	Onset & duration of effect

iv. Briefly outline any concerns or issues related to using cation-exchange resins (calcium resonium) for the acute treatment of hyperkalaemia (2 marks)

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A 32 year old man is brought to your ED by ambulance with acute confusion, recent tiredness, 10 kg weight loss and heat intolerance. He appears to have bulging eyes. Vital signs are:

HR 146 bpm  
BP 180/110 mmHg  
RR 40 bpm  
SaO<sub>2</sub> 100 % RA  
GCS 13  
Temp 38.5 deg C

i. State the most likely diagnosis and give 4 differential diagnoses for this presentation (5 marks)

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ii. Provide details of 3 specific pharmacological treatments for this condition and the role of each treatment (6 marks)

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iii. List 5 other management and disposition priorities (5 marks)

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Your registrar asks you for advice. A 50-year-old female has presented following a collapse and is now increasingly confused. Her only injury is a minor abrasion to her forehead.

You have the following blood/urine results thus far:

Patient weight 65kg  
Glucose 16.4  
Na 111  
K 4.2  
Urea 7.2  
Creatinine 102  
Hb 13.1  
WCC 12.2  
Plt 175  
Urine Osmolality 125  
Urine Na 42

1. What is her calculated Na? (1 mark)

2. What is her calculated osmolality (1 mark)

3. What are 12 criteria for SIADH on history, examination and investigations? (6 marks)

4. She remains confused and then has a seizure. What is your specific treatment and endpoints. (2 marks)

### 3.3 Gastrointestinal

- a) Clinical examination of the gastrointestinal system E H
- b) Interpretation of the symptoms and clinical signs of the gastrointestinal system E H
- c) Gastrointestinal bleeding DIS H
  - i) Indications for urgent gastroscopy M Ex
  - ii) Techniques used with gastroscopy to control haemorrhage P G
  - iii) Pharmacological agents used in management toxicological agents D H
  - iv) Oesophageal varices DIS H
  - v) Balloon tamponade of gastro-oesophageal varices P G
  - vi) Peptic ulceration DIS H
  - vii) Angiodysplasia of the colon DIS G
- d) Oesophageal disorders
  - i) Infectious disorders DIS G
  - ii) Oesophagitis DIS G
  - iii) Gastroesophageal reflux DIS G
  - iv) Motor abnormalities DIS G
  - v) Mallory-Weiss syndrome DIS H
  - vi) Stricture and stenosis DIS G
  - vii) Tracheo-oesophageal fistula DIS G
  - viii) Neoplastic disorders DIS G
- e) Peptic ulcer disease and gastritis DIS H
- f) Feeding tube management DIS H
- g) Inflammatory bowel disease DIS G
- h) Irritable bowel syndrome DIS G
- i) Infectious disorders and gastroenteritis DIS G
- j) Hepatic disorders
  - i) Jaundice DIS G
  - ii) Interpretation of liver function tests I H
  - iii) Hepatic failure DIS G
  - iv) Hepatitis DIS G
  - v) Other infectious disorders of the liver DIS G
  - vi) Vascular disorders DIS G
  - vii) Liver transplant patient DIS G
  - viii) Alcoholic liver disease DIS G
  - ix) Hepato-renal syndrome DIS G
  - x) Portal hypertension DIS G
- k) Abdominal paracentesis P H

# Gastrointestinal

#### COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES

DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents		Ex - Expert
E - Physical Examination	P - Procedures	S - Systems	H - High
I - Investigations	Eq - Equipment	NCI - Non-clinical/clinical interface	G - General
M - Medical Interventions	T - Theories		

#### COLUMN "LP" – LEVELS OF PRACTICE

A 24 year old woman presents to your emergency department with one week of diarrhoea. She describes 10 bowel motions a day with mucous and small amounts of red blood mixed in with the stool. She is afebrile and her vital signs are normal.

i. List six (6) important features on clinical history to obtain. (6 marks)

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

ii. List six (6) important investigations to perform in the emergency department for this woman. Provide a justification for your choice. (12 marks)

	Investigation (6 marks)	Justification (6 marks)
1		
2		
3		
4		
5		
6		

iii. List five (5) factors that would lead you to recommend admission for a patient with inflammatory bowel disease. (5 marks)

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_
- 4 \_\_\_\_\_
- 5 \_\_\_\_\_

A 24 yo man with a 6 yr Hx of Crohn's disease, presents with 12 hrs history of worsening abdominal pain, fever and vomiting. His vital signs are:

BP 90/60 HR 120 Temp 38.7

A. List six (6) possible causes for this presentation ( 6 marks)

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

B. List five (5) abdominal complications of Crohn's disease ( 5 marks)

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

C. List five (5) investigations that you would request in this patient and justify. (5 marks)

	Investigation	Justification
1		
2		
3		
4		
5		

E. Compare Crohn's disease & Ulcerative Colitis (9 marks)

Characteristics	Crohn's disease	Ulcerative Colitis
Distribution		
Pathology		
Radiology		
Cancer risk		
Presentation		
Bleeding		

Obstruction		
Fistulae		
Weight loss		
Perianal		



A nasogastric tube is being placed in the Emergency department.

1. Complete the table below in regards to four (4) indications for placement of a nasogastric tube in the Emergency department . (8 marks)

	Indication	Purpose/aim of procedure
1		
2		
3		
4		

2. List three (3) methods that are used for confirming the correct position of the tube (3 marks)

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

3. List four (4) complications of nasogastric tube placement (4 marks)

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

A 35 year old woman presents following one episode of haematemesis. She has no documented past history, but reports a long history of excessive alcohol consumption. She takes no regular medications.

Her observations are:

BP	135/65	mmHg
HR	85	/min
Sats	99%	RA
Temp	37°C	

a. State five (5) points to explain your approach to volume replacement for this patient. (5 marks)

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

b. What is the role of antibiotics for this patient? State two (2) points in your answer. (2 marks)

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

The patient is observed in your department. Investigations are pending.

c. List five (5) markers that may be used to predict the need for transfusion or urgent endoscopy for this patient. (5 marks)

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

d. What is the role of proton pump inhibitors for this patient? State three (3) points in your answer. (3 marks)

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

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

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

e. What is the role of Tranexamic acid for this patient? State three (3) points in your answer.

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

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

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

A 67 year old male with a urethral catheter in situ for 2 months, awaiting TURP, presents with a blocked IDC which has been changed. Routine pathology tests were performed.

Na 137	(135-145)	Bilirubin 5	(3-20)
K 4.3	(3.5-5.2)	Prot 68	(60-80)
Cl 104	(95-110)	Alb 38	(32-46)
Bic 22	(22-32)	ALP 585	(30-110)
Urea 5.2	(3-8)	GGT 47	(9-36)
Creat 67	(45-90)	ALT 13	(<55)
eGFR 94	(>60)	AST 39	(12-36)

i. List 2 possible causes for the pathology abnormality (2 marks)

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ii. List 3 further pathology tests you would perform and provide reasoning (6 marks)

Test	Clinical reasoning

iii. List 5 malignancies that metastasize to bone (5 marks)

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iv. What type of bony metastases occurs in prostatic malignancy? (1 mark)

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A 50 year old female presents to your Emergency department with Right upper quadrant pain. He has been previously healthy and on no regular medications

Her vital signs are:

BP	90/50	mmHg
HR	120	bpm
Temp	38.9	deg Celcius
RR	24	/bpm
O2 sat	98%	RA

She is allergic to penicillin.

His LFTs are:

Bilirubin total	24	Umol/L	( 2 - 24)
ALP	550	IU/L	(30 - 110)
GGT	480	IU/L	< 60
ALT	100	IU/L	< 55
Albumin	20	g/L	(34 - 48)

a) What is your diagnosis ? (1 marks)

---

b) State four (4) historical features that can help you determine the cause of her abnormalities. (4 marks)

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

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

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

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

c) State four (4) sonographic findings to confirm your diagnosis? (4 marks)

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

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

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

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

d) What is the 'Gold Standard' imaging test for above diagnosis? (1 mark)

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e) List two (2) cons for stated 'Gold Standard' test.(2 marks)

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# Haematology & Oncology

## 3.6 Haematological

- a) Clinical examination of the haematological system E H
- b) Interpretation of symptoms and clinical signs of the haematological system E H
- c) Interpretation of haematological investigations I H
- d) Anaemia DIS H
- e) Abnormal haemoglobins DIS G
- f) Disorders of haemostasis and coagulation DIS H
- g) Anticoagulant agents D H
- h) Antiplatelet agents D H
- i) Neutropenia DIS H
- j) Thrombocytopenia DIS H
- k) Thrombocytosis DIS G
- l) Disorders of white cells DIS G
- m) Myelodysplastic disorders DIS G
- n) Paraproteinaemia DIS G
- o) Blood transfusion and component therapy D/S Ex
- p) Transfusion reactions DIS H

## 3.7 Oncology

- a) Clinical examination in patients suspected of having a malignancy E H
- b) Interpretation of symptoms and clinical signs associated with malignancy E H
- c) Complications of chemotherapeutic agents D G
- d) Complications related to local tumour involvement
  - i) Acute spinal cord compression DIS H
  - ii) Upper airway obstruction DIS H
  - iii) Malignant pericardial effusion DIS G
  - iv) Superior vena cava syndrome DIS G
  - v) Pancoast's syndrome DIS G
- e) Hyperviscosity syndrome DIS G
- f) Complications related to myelosuppression DIS G
  - i) Febrile neutropenia DIS G
  - ii) Immunosuppression and opportunistic infections DIS G
  - iii) Thrombocytopenia and haemorrhage DIS G
- g) Malignancies specific to organ systems DIS G
- h) Paraneoplastic syndromes DIS G

### COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES

### COLUMN "LP" – LEVELS OF PRACTICE

DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents		Ex - Expert
E - Physical Examination	P - Procedures	S - Systems	H - High
I - Investigations	Eq - Equipment	NCI - Non-clinical/clinical interface	G - General
M - Medical Interventions	T - Theories		

A 60 yr old female presents to your Emergency Department with a one day history of fever and right arm discomfort. She is currently undergoing chemotherapy.

Her vital signs are:

HR 95 bpm

BP 120 / 75

Temp 38.5 °C

a. Describe the clinical image (5 Marks)

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b. List the differentials for this patient's presentation (5 Marks)

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A 62 yr old male presents to your Emergency Department complaining of dyspnoea and headache. He is currently on chemotherapy.

Vital signs:  
HR 85  
Bp 124/76  
Temp 36.3 °C

a. Describe & interpret the clinical image of the patient (2 Marks)

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b. List 4 causes of this clinical picture (4 Marks)

1. 

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2. 

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3. 

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4. 

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c. List 8 side effects associated with chemotherapy (4 Marks)

1. 

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2. 

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3. 

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4. 

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5. 

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6. 

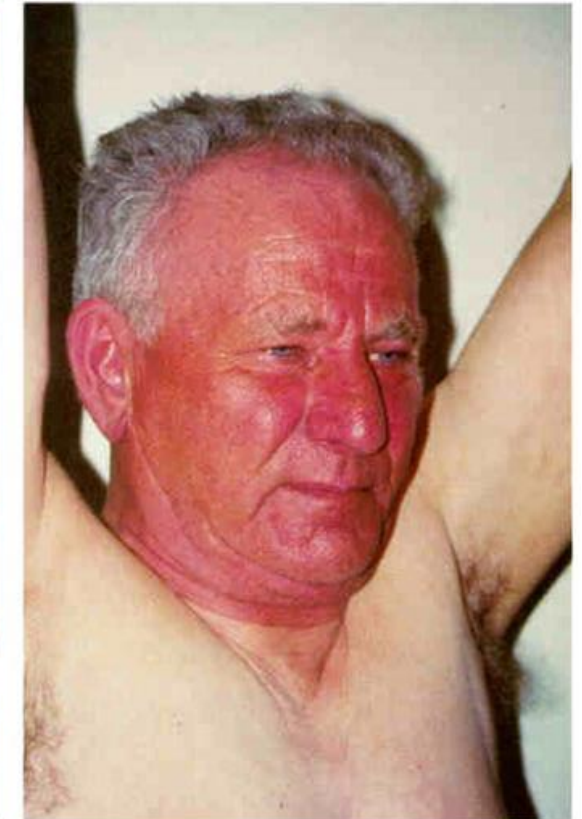
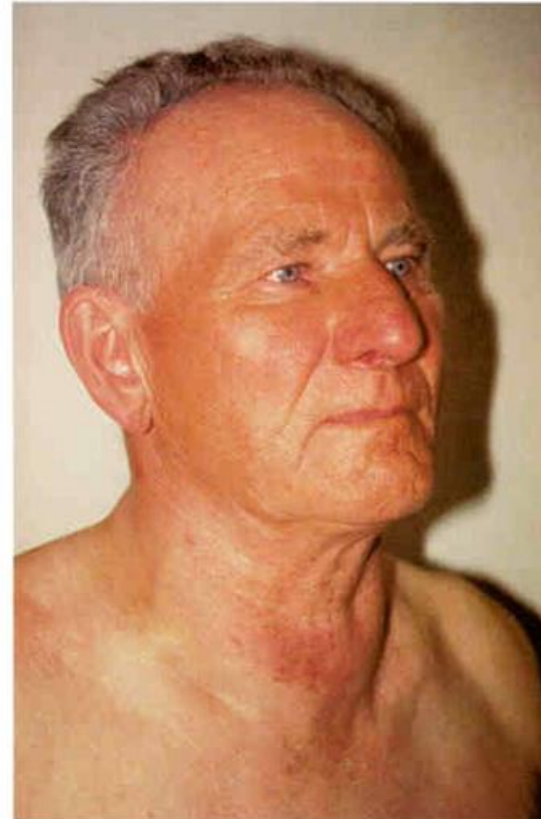
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7. 

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8. 

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A 52 year old man is brought to your emergency department via ambulance after he lost control of his motorcycle at 80 km per hour on a bend and was flung several metres onto a bitumen road. He was wearing a helmet and full protective leathers. His presentation is complicated by the pre-existing history of a mitral valve replacement and ongoing warfarin therapy. His INR was 3.1 when checked by his LMO last week.

On assessment he complains primarily of abdominal and back pain and tenderness. He is currently haemodynamically stable, GCS 15 and early bedside investigations including CXR, pelvic Xray and fast scan reveal no concerning injuries.

- a) List the pertinent risks and benefits to consider when determining whether reversal of this mans anticoagulation should occur. (6 marks)


- b) What agents would you use and in what doses if you decided to reverse his anticoagulation. (4 marks)

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# Infectious Diseases

## 3.11 Infectious disorders

- a) Clinical examination in patients with infectious disease E H
- b) Interpretation of symptoms and signs in patients with infectious disease E H
- c) Blood cultures P Ex
- d) Universal and standard precautions S H
- e) Protection of staff from infectious disease S H
- f) Isolation of patients with infectious disease S H
- g) Infection control in the ED S Ex
- h) Body fluid exposure S Ex
- i) Vaccination in the ED M/D/S H
- j) Infectious disease surveillance S G
- k) Infectious disease outbreaks DIS H
- l) Reportable communicable diseases S H
- m) Contact management of patients with serious infectious disease T/S H
- n) Antibiotic use in the ED D Ex
- o) Outpatient antibiotic therapy M/D/S H
- p) Febrile infant management
  - i) Bacteraemia DIS H
- q) Systemic inflammatory response syndrome T H
- r) Sepsis, severe sepsis and septic shock T H
- s) Multiple organ dysfunction DIS H
- t) Toxic shock syndrome DIS H
- u) Infections in the returned traveller
  - i) Malaria DIS G
  - ii) Dengue fever DIS G
  - iii) Haemorrhagic fevers DIS G
  - iv) Typhoid DIS G
  - v) Others DIS G
- v) Bacterial
  - i) Food poisoning DIS G
  - ii) Meningococcaemia DIS H
  - iii) Disseminated gonococcal infection DIS H
  - iv) Tuberculosis and other mycobacterial infections DIS G
  - v) Gas gangrene DIS H
  - vi) Necrotising fasciitis DIS H
  - vii) Fournier's gangrene DIS H
  - viii) Diphtheria DIS G
  - ix) Haemophilus influenzae DIS G
- w) Sexually transmitted infections DIS H
- x) Viral
  - i) HIV DIS H
  - ii) Infectious mononucleosis DIS G
  - iii) Influenza/parainfluenza DIS G
  - iv) Herpes simplex DIS H
  - v) Herpes zoster DIS H
- y) Mycoplasma infections DIS H
- z) Fungal infections DIS G
- aa) Protozoal infections DIS G
- ab) Tick-borne infections DIS G
- ac) Infection from a marine source DIS H
- ad) Infection in the burns patient DIS G
- ae) Biologic weapons D/S H

### COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES

DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents	COLUMN "LP" – LEVELS OF PRACTICE  Ex - Expert H - High G - General
E - Physical Examination	P - Procedures                      S - Systems	
I - Investigations	Eq - Equipment                      NCI - Non-clinical/clinical interface	
M - Medical Interventions	T - Theories	

A 30 year old woman presents to the ED complaining of fever, headache, arthralgia and photophobia. She has been unwell for 5 days. Her symptoms initially started like an upper respiratory tract infection, and have not improved despite oral antibiotics.

1. List five (5) contraindications for lumbar puncture.

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A lumbar puncture is performed and the results are shown on the opposite page.

2. What are the two (2) most likely diagnoses?

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3. List 3 features of the CSF that support your diagnoses

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4. List two (2) pros and two (2) cons for the administration of intravenous antibiotics in this patient

Pros	Cons

			Reference range
Appearance	clear, colourless		
Glucose	3.0	mmol/L	2.8 - 4.0
Protein	750	mg/L	150 - 500
WBC			
Polymorphs	20	$\times 10^6/L$	<5
Lymphocytes	111	$\times 10^6/L$	<5
Red cells	8	$\times 10^6/L$	<5
Organisms	no organisms seen		
Serum Glucose	5.0		

A 35 year old woman presents to the emergency department with fever, rigors and vomiting. She is 5 days post chemotherapy (4<sup>th</sup> cycle) for breast cancer.

On examination her observations are as follows:

Temp	39	°C
HR	120	/min
BP	80/60	mmHg
RR	28	/min
Sats	96%	on 3L O <sub>2</sub> by nasal prongs

1. Describe your four (4) treatment priorities

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2. List 5 investigations and give justification for each

Investigation	Justification

3. List four (4) factors that influence antibiotic choice

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A 22 year old man presents with facial pain and a rash.

A clinical photograph is shown below.



1. What is your provisional diagnosis?

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2. Describe four (4) features on the clinical photograph that support this diagnosis.

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3. List five (5) important complications of this presentation.

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3. List three (3) key features on assessment that would mandate admission.

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A 17 year old patient with severe spastic quadriplegia secondary to cerebral palsy is brought to the emergency department. The patient lives at home but is dependent on her parents for full care. She has been unwell for 48 hours with cough, fevers and increasing drowsiness.

1. Describe four (4) features on history that would determine that this patient requires inpatient admission.

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2. The ambulance crew have been unable to obtain IV access despite multiple attempts. Describe three (3) options of obtaining access for administration of medication.

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3. The patient is diagnosed with a severe pneumonia. The patient's parents would like full resuscitation with intubation and intensive care if required. Describe six (6) points to discuss with the family.

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A 24 year old man is brought in by ambulance with a 1 day history of rash and fever. He has received 2 litres of IV normal saline prescribed by the junior registrar who has been treating him. The nurse comes to you concerned that he has been deteriorating and his rash has been getting progressively worse while in the department.

His vital signs are as follows:

Temp	39.5	°C
HR	130	beats/min
BP	80/40	mmHg
SaO <sub>2</sub>	95%	on room air

A clinical photograph of his rash is shown in the props booklet supplied - page 16.

i. What is the most likely diagnosis?

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ii. What are your three (3) treatment priorities?

1 

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2 

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3 

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iii. List four (4) steps in managing his hypotension, giving drugs and doses where appropriate.

1 

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2 

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3 

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4 

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5 

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iv. Describe five (5) variables that you use to assess his response to treatment.

1 

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2 

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3 

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4 

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5 

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vi. Name one recent landmark trial in the treatment of sepsis.

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A 55 year old woman presents having been bitten on her right foot by a cat 5 days previously. Her local doctor has been treating her with IM ceftriaxone for the past 3 days with no improvement in her symptoms. She is systemically well.

A clinical photograph is shown on page 16 of the props booklet.

i. State four (4) relevant positive findings on the photograph supplied. (4 marks)

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_

4 \_\_\_\_\_

ii. List three (3) clinically significant possible complications in this patient. (3 marks)

1 \_\_\_\_\_

2 \_\_\_\_\_

3 \_\_\_\_\_



iii. Prescribe two (2) medications in the chart below. (8 marks)

Date	Medication (Print Generic Name)	Tick if Slow Release
Route	Dose	Frequency

Date	Medication (Print Generic Name)	Tick if Slow Release
Route	Dose	Frequency

iv. State two (2) rationale for your choice of antibiotic. (2 marks)

1 \_\_\_\_\_

2 \_\_\_\_\_

A 72 year old male is brought to ED by family with pain and swelling in his left calf for the last 24 hours. He has a history of myelodysplasia and denies trauma. On examination the calf is swollen and tender.

i. List 4 possible causes of his calf pain (4 marks)

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In the ED, the patient continues to complain of pain despite opiate analgesia. His leg is increasingly swollen and now is erythematous with palpable crepitus. Vital signs are as follows:

GCS 15

Temp 37.8C

HR 120

BP 66/40

Sats 96% RA

ii. List your immediate management priorities in this patient. Include drugs, doses and end points where appropriate (5 marks)

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iii. List 3 risk factors for this condition (3 marks)

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iv. The patient's hypotension remains refractory to fluid treatment and you decide to start vasoactive therapy. Give an example of a suitable medication for this patient with typical dosing/concentrations and treatment end points (3 marks)

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A 26 year old man, arriving from West Africa five days ago, is brought to the emergency department by his concerned relatives. He has a history of malaise, anorexia and a non-blanching rash.

His vital signs are:

HR	120	beats/min
BP	110/70	mmHg
RR	24	/min
O <sub>2</sub> Saturation	98	% on room air
Temperature	38.5	°C

i. List your three (3) most important differential diagnoses.

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

ii. List three (3) key issues for your initial management in the emergency department, and two (2) details for how you would accomplish them.

	Key issue	Details of how to accomplish
1		1.
		2.
2		1.
		2.
3		1.
		2.

iii. List and justify your four (4) most important diagnostic investigations.

	<b>Diagnostic investigation</b>	<b>Justification</b>
1		
2		
3		
4		

A 30 year old man undergoes a lumbar puncture in the emergency department for investigation of fever, headache and vomiting. His cerebrospinal fluid and serum glucose results are as follows:

			Reference Range
Opening pressure	220	mm H <sub>2</sub> O (supine)	(50-200)
Colour:	mildly turbid		
WCC	400	/ml (predominance of lymphocytes)	(0-2)
RBC	10	/ml	(0)
Protein:	1.2	g/L	(0.2-0.5)
CSF glucose	2.2	mmol/L	
Gram stain	No organisms seen		
Serum glucose	6.2	mmol/L	(3.0-8.0)

a. List 4 key features of the patients CSF sample results (2 Marks)

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

b. List 6 potential complications associated with lumbar punctures (3 Marks)

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

c. List 5 potential causes for this patient's CSF result (5 Marks)

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

A 42 year old man has developed a febrile illness one week after returning from a business trip to Papua New Guinea.

- i. What questions specific to this case should form part of the history that you will obtain? (6 marks)

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- ii. Describe how the diagnosis of malaria can be established (3 marks)

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- iii. Plasmodium falciparum has several characteristics that are markedly different to the other Plasmodia species. Briefly describe 3 differences (3 marks)

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- iv. List 4 complications that occur in severe P falciparum infection (4 marks)

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A 34-year-old man presents 10 days after a business trip to Papua New Guinea. He has had fevers, malaise, generalised aches and frequent episodes of diarrhoea.

HR 130  
BP 100/50  
Temp 38  
Sats 98% on air.

1. List 10 potential causes of fever & illness in this man. (5 marks)

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

2. What blood tests will you request? (3 marks)

Investigation	Justification

3. List 4 major complications of severe Plasmodium falciparum malaria. (4 marks)

i. \_\_\_\_\_

ii. \_\_\_\_\_

iii. \_\_\_\_\_

iv. \_\_\_\_\_

4. What are the two main choices for the urgent initial treatment of severe Plasmodium falciparum malaria? (2 marks)

(1) \_\_\_\_\_

(2) \_\_\_\_\_



A 55 year old male presents from homeless shelter with symptoms of fever. Over the preceding 6 months he had been living in a crowded and squalid disused house. The shelter staff are aware that there has been a recent diagnosis of tuberculosis at the site.

- i. Apart from the homeless, list 4 other higher risk population groups in Australia for tuberculosis (4 marks)

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- ii. List 4 radiographic findings of patients with acute primary pulmonary TB (4 marks)

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- iii. The NUM of the ED has infection control concerns. List the specific transmission precaution for TB and 3 features of this strategy (4 marks)

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- iv. Initial sputum staining has confirmed the presence of Acid Fast Bacilli. An Infectious Diseases Specialist has suggested commencing Standard Short Course Therapy. List the 4 antibiotics of this therapy (2 marks)

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- v. Concerns are raised for this patient's likely compliance to this antibiotic regimen. In addition to compliance what are the potential benefits of Direct Observed Therapy (DOT) (2 marks)

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A 32 year old man presents to your Emergency Department with a history of fever, lethargy and severe pain in his right groin and thigh. He has a history of intravenous drug use but is otherwise well and on no medications. On examination his right thigh is diffusely swollen, erythematous and has palpable crepitus.

His vital signs are:   HR 120 bpm  
                              BP 85/40 mmHg  
                              T 40 deg C  
                              RR 20 bpm  
                              SaO2 99% RA

i.   What is your working diagnosis (3 marks)

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ii.   Outline your key management steps (6 marks)

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iii.   List 3 likely microorganisms to have caused this patient's infection (3 marks)

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iv.   The nurse reports this patient is extremely distressed with pain and is crying out for larger doses of analgesia and his methadone. List some principles of pain management in this patient with narcotic addiction (4 marks)

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A 30yo IV drug user is BIBA with acute stridor. En-route he has been given adrenaline 500mcg IM, ventolin and oxygen. He has an IV in place.

He is alert, diaphoretic, and pale, febrile T-38.5C, PR 100SR, BP 120/80, RR 20, Sats 96% R/A. He has impaired mouth opening and abdominal rigidity. He reports feeling unwell and complains of difficulty swallowing and back pain and over the past three days.

(a) What is your DDx for this presentation? (40%)

(a) What is the pathophysiology of tetanus (20%)

(a) What are the priorities in the management of this man with generalized tetanus? (40%)

A 22 year old female medical student is brought in by ambulance following a short seizure at home. She has recently returned from her elective in Malawi. Her student friends are unsure if she took any of her medications because they gave her nightmares. She is now drowsy and not orientated. You call public health and they do not suspect Ebola.

1. Name the most likely causative organism (1 mark)

2. A BSL is normal. What other initial blood tests will you arrange immediately and what would you expect for each? (4 marks)

3. Public health calls back as there has been 5 cases of Ebola confirmed in Malawi in the clinic the medical student was at. Outline the important issues. (5 marks)

# Dermatology

## 3.10 Dermatology

- a) Clinical examination of the dermatology system E H
- b) Interpretation of symptoms and clinical signs of the dermatological system E G
- c) Examination and description of a lump, lesion ulcer of the skin, or rash E H
- d) Dermatitis and eczema DIS G
- e) Urticarial and allergic rashes DIS H
- f) Viral exanthems DIS G
- g) Macular rashes DIS G
- h) Maculopapular lesions
  - i) Erythema multiforme DIS H
  - ii) Erythema nodosum DIS G
  - iii) Others DIS G
- i) Papular and nodular rashes DIS G
- j) Petechial and purpuric rashes DIS G
- k) Vesicular and bullous rashes
  - i) Pemphigus DIS G
  - ii) Pemphigoid DIS G
  - iii) Staphylococcal scalded skin syndrome DIS H
  - iv) Stevens-Johnson syndrome DIS H
  - v) Toxic epidermal necrolysis DIS H
  - vi) Herpetic infections DIS H
  - vii) Others DIS G
- l) Ulceration DIS G
- m) Cellulitis DIS H
- n) Dermatological manifestations of underlying systemic disease DIS G
- o) Dermatological manifestations of neoplastic disorders DIS G

### COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES

DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents	S - Systems
E - Physical Examination	P - Procedures	NCI - Non-clinical/clinical interface
I - Investigations	Eq - Equipment	
M - Medical Interventions	T - Theories	

### COLUMN "LP" – LEVELS OF PRACTICE

Ex - Expert
H - High
G - General

A 70 year old man with past history of COAD presents with two days of rash and fever. His only medications are metered aerosol inhalers of salmeterol and fluticasone. His observations are all within normal limits. A clinical image of his rash is shown on the next page.

a. Describe key features of the clinical image (2 Marks)

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b. List potential 8 diagnoses for this clinical presentation (4 Marks)

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2. 

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3. 

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4. 

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5. 

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6. 

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7. 

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8. 

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c. List 8 potential complications in this case (4 Marks)

1. 

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2. 

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3. 

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4. 

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5. 

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6. 

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7. 

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8. 

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A 54 year old woman presents to the ED with three days of painful swelling in her left wrist and hand. A clinical image of the patient's forearms is shown on the next page.

a. Describe and interpret the clinical image (6 Marks)

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b. Outline your investigations & rational for investigation in this patient (4 Marks)

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A 25 year old male presents to the Emergency Department with a three day history of spreading rash and painful oral lesions.

Vital signs:

HR 90 /min

RR 15

BP 110/60 mmHg

Sats 97% on room air

A clinical image of the patient's mouth and forearms is shown on the next page.

a. Describe and the clinical image (2 Marks)



b. List 4 potential diagnosis (4 Marks)



c. List 4 potential causes for this presentation (4 Marks)



With regard to skin and soft tissue infections

- i. List 5 non-infectious conditions that masquerade as unilateral leg cellulitis and indicate the symptoms/signs and/or tests that help to differentiate the condition from cellulitis (10 marks)

Cellulitis mimic	Differentiating symptoms/signs/investigations

- ii. List 3 choices of oral antibiotic which cover *Streptococcus pyogenes* and *Staphylococcus aureus* (3 marks)

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- iii. Briefly explain the pharmacodynamic advantage conferred by combining a beta-lactam antibiotic with:

(a) Probenecid (2 marks)

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(b) Clavulanic acid (2 marks)

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- iv. Regarding the management of abscesses, write short notes on the role of the addition of an antibiotic to simple incision and drainage of the abscess (4 marks)

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A 15-year-old boy has been transferred to your Emergency Department from a rural hospital. He had been given IV benzylpenicillin for a throat infection 48 hours previously.

\*See image on [page 6](#) in separate book\*

1. Describe the appearance of the rash and give a likely differential diagnosis. (3 marks)

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2. Assuming that the underlying cause is a severe drug reaction, outline how you would grade the severity. (2 marks)

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3. Outline your management of the patient. (3 marks)

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4. What acute complications can develop from this disorder? (2 marks)

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A 40yo female presents complaining of a one week history of malaise, myalgia, arthralgia and a non-productive cough.

Over the last 4 days she has developed a rash initially commencing on her face and upper body.



1. List 4 important features of the rash that you need to assess for (2 marks).

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_

2. Give a differential diagnosis listing your most likely differential diagnosis first (3 marks).

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3. List 5 important potential complications that need to be identified and managed. (5 marks)

- i. \_\_\_\_\_
- ii. \_\_\_\_\_
- iii. \_\_\_\_\_
- iv. \_\_\_\_\_
- v. \_\_\_\_\_

A 70 year old man presents with a painful facial rash that started 5 days ago. There have been no new skin lesions for 24 hrs. Vital signs are normal but he is distressed with pain.

**A CLINICAL IMAGE IS SHOWN IN THE PROPS BOOKLET, PAGE 12**

i. Describe the appearances seen in this photograph (3 marks)

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ii. List the most likely diagnosis (1 mark)

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iii. List 4 complications of this condition. For each of these, list one examination finding that would support the existence of the complication (8 marks)

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iv. Outline your management for this patient (5 marks)

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A 67 year old man presents to your emergency department complaining of a painful rash to his face which started 2 days ago. A photograph of the rash is shown below.



a) Name the most likely diagnosis (1 mark)

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b) List 3 criteria which must be met to safely discharge this man home. (3 marks)

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c) Outline the salient points of your discharge management and advice for this patient (6 marks)

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A 45 year old man presents to the ED with an intensely itchy rash on his palm, as pictured in the photograph below.



a) Describe 2 features of the rash pictured above (2 marks)

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b) Give the most likely Diagnosis and one differential (2 marks)

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c) What causes the itching? (1 mark)

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d) How can the diagnosis be confirmed? (1 mark)

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e) What treatment and advice would you give the patient? (4 marks)

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A 55 year old man is brought to the ED after being found collapsed at home. He has a medication alert bracelet indicating he has type 1 diabetes.

His observations are:

GCS 12, BP 90/60, HR 130, RR 30, Temperature 38 C

A photograph of the patients left thigh is shown below.



a) Name 2 possible differential diagnoses for this patients presentation (2 marks)

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b) List 3 potential complications this patient is currently at significant risk for. (3 marks)

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c) Outline the 5 most urgent mortality reducing emergency room interventions that you would institute on his arrival in your emergency department. (5 marks)

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# Immunology & Rheumatology

### 3.12 Immunology

- a) Clinical examination of the patient with a suspected immunological disorder E G
- b) Interpretation of symptoms and signs of the immunological systems E G
- c) Hypersensitivity
  - i) Allergic reactions DIS H
  - ii) Anaphylactoid reactions DIS H
  - iii) Anaphylaxis DIS Ex
  - iv) Angioedema DIS Ex
  - v) Drug allergies DIS H
- d) Collagen vascular disease
  - i) Raynaud's syndrome DIS G
  - ii) Reiter's disease DIS G
  - iii) Scleroderma DIS G
  - iv) Systemic lupus erythematosus DIS G
- e) Vasculitis
  - i) Polyarteritis nodosa DIS G
  - ii) Wegener's granulomatosis DIS G
- f) Kawasaki's disease DIS G
- g) Sarcoidosis DIS G
- h) Complication of immunosuppressant agents D G

### 3.9 Rheumatology

- a) Clinical examination of the rheumatological system E H
- b) Interpretation of symptoms and signs of the rheumatological system E G
- c) Arthrocentesis P Ex
- d) Rheumatoid arthritis DIS G
- e) Osteoarthritis DIS G
- f) Crystal arthropathies DIS H
- g) Urgencies and emergencies in systemic rheumatic disease DIS H
- h) Thoracic and lumbar pain DIS H
- i) Neck pain DIS G
- j) Shoulder pain DIS G
- k) Tunnel syndromes
  - i) Carpal tunnel DIS G
  - ii) Ulnar tunnel DIS G
  - iii) Tarsal tunnel DIS G
- l) Complications of drugs used on rheumatic disease D G

COLUMN "LO" – CATEGORIES OF LEARNING OBJECTIVES			COLUMN "LP" – LEVELS OF PRACTICE
DIS - Diseases/Injuries/Symptoms	D - Pharmacological & toxicological agents	S - Systems	Ex - Expert
E - Physical Examination	P - Procedures	NCI - Non-clinical/clinical interface	H - High
I - Investigations	Eq - Equipment		G - General
M - Medical Interventions	T - Theories		