



# COLLEGE OF INTENSIVE CARE MEDICINE OF AUSTRALIA AND NEW ZEALAND

## SECOND PART EXAMINATION

### EXAM REPORT

August / October 2025

This report is prepared to provide candidates, tutors, and Supervisors of Training (SOTs) with information regarding the assessment of candidates' performance in the CICM Second Part General ("SP") Examination. This report is for use as an educational resource and includes a guide as to expected content of the answers for the written section. Trainees/SIMGs should discuss the report with their supervisors and educators so that they may prepare appropriately for future examinations. Trainees/SIMGs should not rely solely on writing practice answers to previous exam questions for exam preparation and should first establish a strong knowledge base from clinical learning and studying relevant texts, journals, and on-line resources.

The exam comprises a written section and an oral section. The written section consists of two papers, comprised of 15 short answer questions each. The pass mark for the written section is derived by the Angoff method and for this sitting was set at **51.87%**. The oral section consists of eight interactive vivas and two separate clinical hot cases. The vivas were completed in Brisbane over two consecutive days (Thursday 23<sup>rd</sup> and Friday 24<sup>th</sup> October), and the hot cases were completed in Brisbane (Wednesday 22<sup>nd</sup> October).

The tables below provide an overall statistical analysis as well as information regarding performance in the individual sections. A comparison with data from the five previous exams is provided.

**In all sections of the exam the candidate must demonstrate performance consistent with that of a trainee who is ready to enter the transition year of the CICM training program, by demonstrating they have the ability for safe, effective, independent practice as a transitional fellow. Candidates who are not at this level are encouraged to defer their attempt at the exam.**

Overall Performance	2025.2	2025.1	2024.2	2024.1	2023.2	2023.1	2022.2
Presenting for written (Including SIMG)	83	62	108	76	81	66	52
Carrying a written pass or exempted from a previous attempt	17	13	17	20	11	8	29
SIMG written exempt	2	1	3	4	2	2	3
Total number presenting (written + carry + SIMG)	102	77	128	100	94	76	84
Invited to orals (passed written section)	45	41	53	45	47	24	23
Total number invited to the oral section	64	56	70	65	58	32	52

<b>Analysis of Performance in Individual Sections</b>	<b>2025.2</b>	<b>2025.1</b>	<b>2024.2</b>	<b>2024.1</b>	<b>2023.2</b>	<b>2023.1</b>	<b>2022.2</b>
Successful in the written section	45/83	41/62	53/108	45/76	47/81	24/66	23/52
	<b>54%</b>	<b>66%</b>	<b>49%</b>	<b>59%</b>	<b>58%</b>	<b>36%</b>	<b>44%</b>
Successful in the Hot case section	37/64	35/56	43/70	31/65	32/58	18/32	27/51
	<b>58%</b>	<b>63%</b>	<b>61%</b>	<b>48%</b>	<b>55%*</b>	<b>56%</b>	<b>53%</b>
Successful in <u>both</u> Hot cases	24/64	24/56	24/70	17/65	17/58	13/32	16/51
	<b>38%</b>	<b>43%</b>	<b>34%</b>	<b>26%</b>	<b>29%</b>	<b>41%</b>	<b>31%</b>
Successful in the Viva section	50/64	46/56	51/70	53/65	48/58	27/32	44/51
	<b>78%</b>	<b>82%</b>	<b>73%</b>	<b>82%</b>	<b>83%</b>	<b>84%</b>	<b>86%</b>

<b>Sectional Pass Rates</b>	<b>2025.2</b>			<b>2025.1</b>		<b>2024.2</b>		<b>2024.1</b>		<b>2023.2</b>		<b>2023.1</b>	
<b>Hot cases</b>	<b>Pass rate</b>	<b>Highest individual mark</b>		<b>Pass rate</b>	<b>Highest individual mark</b>	<b>Pass rate</b>	<b>Highest individual mark</b>	<b>Pass rate</b>	<b>Highest individual mark</b>	<b>Pass rate</b>	<b>Highest individual mark</b>	<b>Pass rate</b>	<b>Highest individual mark</b>
Hot case 1	55%	90%		57%	90%	60%	85%	48%	90%	53%	83%	56%	85%
Hot case 2	61%	90%		66%	90%	49%	80%	51%	80%	53%	85%	56%	90%
<b>Vivas**</b>			<b>Vivas*</b>									<b>Day 1</b>	<b>Day 2</b>
Procedure Viva 1	73%	93%	Viva 1	77%	83%	64%	88%	77%	90%	76%	85%	56% / 65%	63% / 80%
Viva 2	67%	88%	Viva 2	73%	80%	50%	68%	74%	90%	67%	79%	94% / 80%	88% / 86%
Viva 3	61%	88%	Radiology Viva 3	36%	69%	67%	80%	54%	70%	48%	76%	75% / 83%	63% / 62%
Radiology Viva 4	45%	80%	Procedure Viva 4	75%	85%	49%	93%	71%	90%	74%	88%	81% / 78%	56% / 74%
Viva 5	67%	83%	Viva 5	80%	95%	73%	90%	62%	85%	76%	90%	44% / 74%	81% / 70%
Viva 6	80%	83%	Viva 6	70%	77.5%	81%	93%	58%	97%	79%	91%	63% / 64%	63% / 64%
Viva 7	53%	95%	Viva 7	57%	90%	46%	75%	85%	94%	83%	79%	75% / 80%	88% / 75%
Communication Viva 8	67%	93%	Communication Viva 8	70%	100%	67%	91%	72%	83%	53%	85%	44% / 88%	75% / 75%

\*Vivas 1, 2, 3 and 4 were examined on Thursday and Vivas 5, 6, 7 and 8 were examined on Friday.

\*\*Procedure and Radiology stations were re-ordered 2025.2.

<b>Oral Section Pass Rates</b>	<b>2025.2</b>	<b>2025.1</b>	<b>2024.2</b>	<b>2024.1</b>	<b>2023.2</b>	<b>2023.1</b>	<b>2022.2</b>
Candidates who passed the written section and passed the overall exam	33/47	30/41	39/53	37/45	34/47	17/24	20/52
	<b>70%</b>	<b>73%</b>	<b>74%</b>	<b>82%</b>	<b>72%</b>	<b>71%</b>	<b>38%</b>
All candidates invited to oral section and passed the overall exam (written + carry + SIMG)	43/64	43/56	46/70	50/65	40/58	23/32	36/51
	<b>67%</b>	<b>77%</b>	<b>66%</b>	<b>77%</b>	<b>69%</b>	<b>72%</b>	<b>71%</b>
Overall Pass Rate	43/102	43/77	46/125	50/96	40/92	23/74	36/79
	<b>42%</b>	<b>56%</b>	<b>37%</b>	<b>52%</b>	<b>43%</b>	<b>31%</b>	<b>46%</b>

### **EXAMINERS' COMMENTS**

#### **Written Paper**

54% of the Second Part examination candidates who sat the August 2025 written section were invited to the oral section. Candidates who did not qualify for an invitation did so for one or more of the following reasons:

- Insufficient knowledge of the topic in question.
- Insufficient detail and/or depth of the answer.
- Poorly structured answer.
- Inadequate reference to supportive evidence where relevant.
- Failure to answer the question asked.
- Omission of all or part of the question.

Candidates that failed questions most often gave insufficiently detailed answers that were not at the level expected of a transitional fellow. Candidates often gave generic “proforma” answers that did not deal with the specific issues or scenario outlined in the question.

Candidates are advised to read the questions carefully and thoroughly and ensure they answer the specific question asked and address all parts of each question. Examiners commented that candidates had not appeared to consider the mark distribution in some multi-part questions, spending too little time on the more important sections. Candidates are reminded to make sure their writing is legible and to avoid using non-standard abbreviations. Candidates are also reminded that professional conduct is assessed throughout the exam process and that inappropriate comments written on the answer paper are not acceptable.

The examination report is now referenced to the syllabus to aid the candidate in directing their study more effectively. A selection of marking rubrics to complement the SAQ discussion have been published to guide trainees, SOTs, and educational advisors in the requirements of the assessment process and the standard of written content expected of the transitional fellow.

*Candidates are strongly encouraged to consider feedback and advice from SOTs and educational advisors when considering the appropriate time for them to attempt the Second Part Examination.*

#### **Content Coverage and weighting of the SP syllabus**

The CICM [T-18.1](#) (2025) document details the Second Part Examination construction, content and weighting of the SP syllabus. The aim of this resource is to ensure all CICM SP examination sittings are fair, consistent and aligned with the syllabus.

The T-18 document applies for all Second Part examination sittings commencing 2025, however the written paper has followed the principles outlined in T-18 (2025) for the past three SP examination sittings as the syllabus was developed and released for the 2024 sittings.

The last four SP written examination sittings are published below to demonstrate the application of the T-18 (2025). Knowledge of the syllabus coverage and weighting will help candidates, tutors and SOTs understand the scope of the examination, act as an educational resource and focus their preparation efforts accordingly.

### Coverage of the Syllabus Domains of Content

The Second Part examination written section will cover >65-70% of the syllabus domains per sitting.

	2025.2	2025.1	2024.2	2024.1
<b>Syllabus domain coverage</b>	70%	74%	74%	74%

### Levels of Understanding

L2 Conditions and topics will comprise no more than 30% of the written paper in total (90 marks out of 300 marks) and L2 conditions and topics will not form the primary focus of individual vivas.

Levels of understanding	2025.2	2025.1	2024.2	2024.1
<b>Level 1</b>	87%	82%	92%	88%
<b>Level 2</b>	13%	18%	8%	12%

### Categories of the SAQs

SAQs will examine candidates at different cognitive levels e.g., ability to recall, understand, apply, analyse and evaluate knowledge based on Blooms taxonomy.

Categories of SAQs	2025.2 - SAQ totals	2025.1 - SAQ totals	2024.2 - SAQ totals	2024.1 - SAQ totals
<b>Clinical Dx/ Assessment</b>	9	8	9	10
<b>Clinical Management</b>	12	10	9	9
<b>Interpretation of Investigations</b>	4	4	5	5
<b>Evaluations of Evidence</b>	2	2	3	2
<b>Professional behaviour</b>	0	2	1	1
<b>Equipment / Procedure</b>	2	5	3	3

# Distribution of the written examination 2025.2

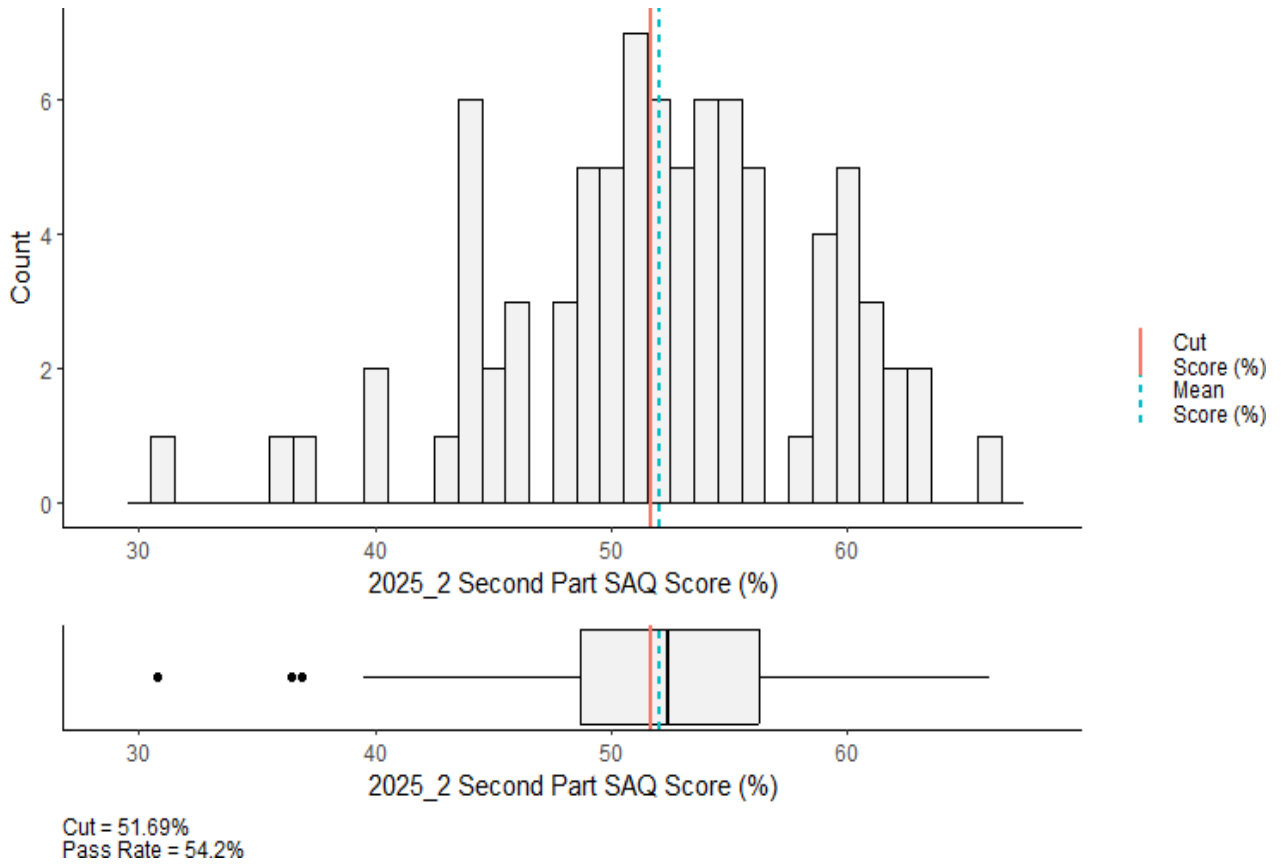


Figure 1: Distribution Plot of Second Part SAQ Exam Raw Scores

## SECOND PART WRITTEN EXAMINATION

- (A) Write your answers in the blue books provided. **Each** question should be answered in a separate booklet. Please **DO NOT** write two short answer questions in the same booklet.
- (B) Start each answer on a **new booklet** and indicate the **question number**. It is not necessary to rewrite the question in your answer book.
- (C) You should aim to answer each question in **ten** minutes.
- (D) **All** questions are worth ten marks each in total.
- (E) Record your **candidate number** and each **question number** on the cover of each book, page, and hand in all booklets.

### GLOSSARY OF TERMS

<b>Critically evaluate:</b>	Provide and explain the evidence available relating to a topic.
<b>Outline:</b>	Provide a summary of the important points.
<b>List:</b>	Provide a list.
<b>Compare and contrast:</b>	Provide a description of similarities and differences. You may tabulate your answer.
<b>Assessment:</b>	Generic term that implies determining an underlying diagnosis, encompassing; history, clinical examination, and relevant investigations.
<b>Management:</b>	Generic term that implies determining an overall management plan, encompassing; resuscitation, definitive treatment, initial and ongoing monitoring with supportive treatment.
<b>Discuss:</b>	Explain the underlying key principles. Where appropriate, this may include controversies and/or advantages and disadvantages.
<b>Explain:</b>	Make plain or known in detail.

### NOTE

Where laboratory values are provided, abnormal values are marked with an asterisk (\*).

## Question 1

A 60-year-old patient remains intubated with a reduced consciousness level 6 hours following endovascular clot retrieval (ECR) for an acute middle cerebral artery (MCA) stroke. Sedation was stopped immediately post procedure.

- a. List six likely causes of the reduced conscious state (3 marks)
- b. Outline your assessment of this patient's reduced conscious level (7 marks)

**Syllabus topic/section:** 2.1.8 Neurological Intensive Care

### Discussion:

This question was answered well by most candidates and was assessed to be an easy question to pass. Better marks were scored by candidates who described an assessment that was tailored to the clinical scenario, rather than a more generic description of how to assess someone with a decreased conscious state.

For instance, the above standard answer would include both stroke AND procedure related history with relevant details for investigations and examination.

Angoff score for this SAQ	5.91
Highest candidate score achieved	8.50
Angoff pass rate	66.3%

## Question 2

Compare and contrast prothrombin complex concentrate (PCC) and fresh frozen plasma (FFP) in the management of a warfarinised patient with major haemorrhage under the following headings:

- a. Constituents and methods of administration (2 marks)
- b. Advantages (4 marks)
- c. Contraindications and potential adverse effects (4 marks)

**Syllabus topic/section:** 2.1.21 Applied Pharmacology in Intensive Care

### Discussion:

This was a compare and contrast question. Candidates gained more marks if they highlighted the differences and explained how they might be significant. For example, FFP contains all the clotting factors allowing for correction of non-Vitamin K dependent factor deficiencies (eg haemophilia's, factor V deficiency) however, PCC contains small amounts of heparin and therefore not suitable in the setting of ADR/HIT etc.

Likewise, the better answer for advantages contained information about product storage, preparation and administrative differences and what that would mean clinically. The above standard answer would also include references to blood typing.

The rubric is provided to aid in the candidates' future study.

	<b>Below standard</b>	<b>At standard</b>	<b>Above standard</b>
<b>a) Constituents and administration</b>  <b>(2 marks)</b>	Does not accurately list contents of PCC or FFP OR Provides incorrect information around administration  <b>0-0.5 marks</b>	Lists the contents of PCC (either Prothrombinex or Beriplex) and FFP with few inaccuracies/omissions Mentions most of the information about dosing and preparation of the 2 products  <b>1-1.5 marks</b>	<b>At standard PLUS</b> Lists the contents of PCC and FFP with no inaccuracies/omissions Provides comprehensive detail about the dosing and administration of the 2 products  <b>2 marks</b>
<b>b) Advantages</b>  <b>(4 marks)</b>	No or a limited number of advantages provided OR Provides a narrow range of advantages from only some of the categories of storage preparation or administration OR Only mentions advantages for one product  <b>0 - 1.5 marks</b>	Includes a broad range of advantages for each product with some comparison of the advantages related to product storage, preparation and administration.  <b>2 - 2.5 marks</b>	<b>At standard PLUS</b> a more comprehensive range of advantages that includes reference to blood typing for FFP with more detail provided around storage, preparation and administration of each product.  <b>3 – 4 marks</b>

<p><b>c) Contraindications/Potential adverse effects</b></p> <p><b>(4 marks)</b></p>	<p>No or limited number of contraindications/ adverse events provided OR Only mentions contraindications/ adverse events for one product Does not mention anaphylaxis for FFP</p> <p><b>0 - 1.5 marks</b></p>	<p>Includes a broad range of contraindications/adverse events for each product with some comparison between them Must provide some examples of contraindications/adverse events for each product and include anaphylaxis for FFP</p> <p><b>2 - 2.5 marks</b></p>	<p><b>At standard PLUS</b> a more comprehensive and wide range of contraindications/ adverse events that includes most of the AE listed below. May include reference to the need for blood typing with FFP (if not already mentioned above)</p> <p><b>3 - 4 marks</b></p>
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Angoff score for this SAQ	4.50
Highest candidate score achieved	6.63
Angoff pass rate	48.2%

### Question 3

A 75-year-old patient is admitted to intensive care following endovascular aneurysm repair (EVAR) for ruptured abdominal aortic aneurysm (AAA). On day 2 of admission the patient develops bloody diarrhoea. Ischaemic colitis is suspected.

- a. Outline the mechanisms that may contribute to bowel ischemia in this setting (3 marks)
- b. Outline the investigations that would be useful in evaluating this patient for ischemic colitis. In your answer, include the expected investigation findings (3 marks)
- c. Outline the principles of management for bowel ischemia following EVAR (4 marks)

**Syllabus topic/section:** 2.1.18 Perioperative Issues in Intensive Care; L2 Vascular surgery

#### Discussion:

Candidates who were familiar with endovascular repair, stent malpositioning and specific haemodynamic management for optimisation of GI blood flow gained more marks. Candidates who failed to demonstrate proficiency in detailing investigation findings by noting details of graft position and patency as well as indirect signs of ischaemic colitis such as wall thickening and intramural gas are advised to revise their approach to achieve detail required to the level of the transitional fellow.

Some candidates who did less well misread the question and discussed open AAA repair. Candidates are reminded that wise use of the perusal time will aid in avoiding simple yet costly mistakes in approach to these questions.

Angoff score for this SAQ	5.05
Highest candidate score achieved	7.50
Angoff pass rate	39.8%

#### Question 4

You have been asked to review a new “Drug X” as to whether it should be added to the ICU formulary. It is administered over 7 days for cardiogenic shock to improve ejection fraction (EF). The following study data has been provided:

	Outcome	
	Improved EF	Unchanged EF
Drug X (n=100)	96	4
Placebo (n=100)	92	8

For this set of data:

- Calculate and explain the odds ratio (OR) (2 marks)
- Calculate and explain the relative risk reduction (RRR) (2 marks)
- Calculate and explain the number needed to treat (NNT) (2 marks)
- List the additional information that would aid your decision-making regarding the addition of the drug to the ICU formulary (4 marks)

**Syllabus topic/section:** 2.5.1 Research and Evidence Based Practice in Intensive Care

#### Discussion:

This SAQ was a direct repeat of an SAQ from the previous paper this year. While the pass rate has improved for this topic, candidates still appeared to have knowledge gaps in very straightforward statistical terminology and calculations. Repeat SAQs are a standard feature of the SP written section and candidates are advised to revise past papers, particularly those SAQs which explore important topics or have a prior low pass rate.

In part d) most candidates were able to provide a list with adequate detail; answers could have been improved by linking back to the information provided for the first 3 parts. Candidates who used structure often scored higher marks as they were able to provide more detail. For example, listing decision making information under the headings of drug factors (ie. Storage, pharmacokinetic and pharmacodynamic information), Organisational factors (Cost, staff education, administration concerns) and Patient factors (case mix and cohort requirements) would have provided an example of an above standard answer.

Angoff score for this SAQ	5.36
Highest candidate score achieved	8.75
Angoff pass rate	33.7%

## Question 5

A patient in ICU requires intubation and is known to have a previous Grade 1 view on laryngoscopy.

- a. Outline the physiological factors that could increase the risk of adverse events during intubation  
(4 marks)
- b. Outline your strategies for optimising a physiologically unstable patient to minimise the risk of adverse events during intubation  
(6 marks)

**Syllabus topic/section:** 2.1.19 Intensive Care Procedures; 2.1.4 Cardiovascular Intensive Care; 2.1.5 Respiratory Intensive Care

### Discussion:

Candidates are again reminded to carefully read the question. The question explicitly rules out the anatomically difficult airway and asks for the physiological factors, and many candidates wrote extensively about anatomical and other factors that did not attract marks.

Similarly in Part B. whilst the question asked for physiological factors, many candidates wrote extensively about Front of Neck Access (FONA) and other structural/anatomical issues.

Candidates who used the template of an ABCD format to answer the question were distracted by the template focusing on A and B (anatomical) while candidates who used a system based or problem-based approach were better able to target their answers to the question and gain more marks. A useful strategy in the perusal time is to determine which structure will give the most accurate response to the content required.

Candidates who scored better in the question addressed the physiological factors such as hypoxia/oxygenation, arrhythmias, haemodynamic supports and shock management etc. The above standard candidate included management of acidosis, tiered therapies of inotrope deployment including timing and anticipation of further instability during the rigor of intubation. As with all questions, a clear structure helped answers to gain more marks.

Angoff score for this SAQ	5.14
Highest candidate score achieved	9.25
Angoff pass rate	57.8%

## Question 6

- a. Discuss the considerations involved in the decision to discharge patients directly home from the ICU  
(6 marks)
- b. Outline the reasons why two different ICUs might have different rates of direct home discharge from ICU  
(4 marks)

**Syllabus topic/section:** 2.1.1 Structure and Process; 2.1.2 Decision Making; 2.2.1 Communication and collaboration in Intensive Care; 2.1.16 Populations requiring special considerations in Intensive Care

### Discussion:

Candidates who scored better in this question exhibited a broad and high-level grasp of the more global issues and not simply the mechanics of moving the patient out of the ICU. For instance, answers that addressed issues such as identifying those groups of patients who may be suitable for discharge home tended to gain more marks.

Candidates are again reminded to take note of the Glossary terms, especially the subheadings of what a 'discuss' answer should include. Those candidates who incorporated this structure into their answer were rewarded for their attention to the glossary of terms instructions with higher scores.

Angoff score for this SAQ	4.82
Highest candidate score achieved	7.75
Angoff pass rate	51.8%

## Question 7

A 45-year-old patient is admitted to the ICU with a severe acute traumatic brain injury (TBI) with raised intracranial pressure (ICP). On day 5 a ventilator associated pneumonia (VAP) has developed.

a. Outline the challenges where treatment strategies of one of these conditions may adversely affect the management of the other condition (4 marks)

b. Outline your specific management strategies to resolve these challenges (6 marks)

**Syllabus topic/section:** 2.1.8 Neurological Intensive Care; 2.1.5 Respiratory Intensive Care: Mechanical Ventilatory Support

### Discussion:

The question asked candidates to outline the challenges of managing a patient with two pathologies that have interlinked and competing needs. Many candidates were able to address the management issues related to each pathology but struggled to explain how the management of one pathology (TBI) would affect management of the other (VAP) or vice versa. For example, PEEP used to improve atelectasis and hypoxia in VAP could elevate ICP in TBI and therefore balancing the amount of PEEP and effect on ICP needs to be considered. Another example could be hypothermia management for raised ICP may increase the risk of VAP and therefore normothermia would be an appropriate management strategy.

Candidates that scored well in this question were able to prioritise and interlink a variety of management strategies for the 2 pathologies as well as explaining their rationale.

The rubric is provided to aid the candidate's future study.

	<b>Below standard</b>	<b>At standard</b>	<b>Above standard</b>
a) Outline the challenges where treatment strategies of one of these conditions may adversely affect the management of the other condition  <b>(4 marks)</b>	Absent or limited details answer  or  does not mention PEEP  <b>0-1.5 marks</b>	Can demonstrate some understanding of the major interactions between treatment modalities in the setting of two differing pathophysiology's of TBI with VAP  Includes PEEP in interactions.  <b>2- 3 marks</b>	<b>At standard PLUS</b> Mentioned challenges outside PEEP <i>in detail</i> And /or advanced rescue strategies and how they interact including at least one of <ul style="list-style-type: none"> <li>- Inflammatory markers</li> <li>- Cooling</li> <li>- Physio/bronchoscopy</li> <li>- Prone positioning</li> </ul> <b>3.5 – 4 marks</b>
b) Outline your specific management strategies to resolve these challenges  <b>(6 marks)</b>	Incorrect information  or  fails to adequately reconcile/explain the interaction of treatment modalities and pathophysiology's of TBI with VAP  <b>0-2.5 marks</b>	Outlines reasonable approach to balancing clinical risk vs benefit in above mentioned challenges  <b>3-4.5 marks</b>	<b>At standard PLUS</b> Outlines a comprehensive approach to clinical risk vs benefit with multiple strategies detailed to address the challenges mentioned  <b>5 – 6 marks</b>

Angoff score for this SAQ	4.50
Highest candidate score achieved	7.50
Angoff pass rate	41.0%

## Question 8

List the abnormalities in serum biochemistry tests you would expect to see in each of the following conditions.

For each biochemical laboratory abnormality listed, explain why it occurs. You may tabulate your answer.

- a. Acute Pancreatitis. (3 marks)
- b. Rhabdomyolysis. (4 marks)
- c. Addisons disease. (3 marks)

**Syllabus topic/section:** 2.1.6 Gastrointestinal Intensive Care: Pancreatitis; 2.1.9 Endocrine Intensive Care: Adrenocortical Insufficiency; 2.1.13 Trauma Intensive Care: Rhabdomyolysis

### Discussion:

Candidates that performed well in this question provided a list of abnormalities for each of the 3 conditions and included an appropriate explanation as to why they occur. For example, part a) hypocalcaemia due to saponification and fat necrosis or hyperglycaemia from impaired insulin secretion, and for part b) hyperkalaemia and hyperphosphatemia due to lysis of muscle cells. Tabulating the answers into 2 columns with the abnormality in one and explanation in the other made it easier for candidates to clearly provide the information for both parts of the question (list and explain).

Candidates who scored less well mistook the question for a compare and contrast between the 3 conditions or provided an interpretation of the data and listed the conditions eg AKI, rather than listing the abnormalities of raised urea and creatinine. Many candidates also lost marks for not providing sufficient detail to explain the reason for the biochemical abnormalities they listed.

Angoff score for this SAQ	5.82
Highest candidate score achieved	9.00
Angoff pass rate	60.2%

## Question 9

A 67-year-old patient develops severe subcutaneous emphysema of the upper chest wall and neck three hours after a transbronchial biopsy of a lung nodule. The patient is not intubated.

- a. Outline your management of the severe subcutaneous emphysema (6 marks)
- b. Outline your approach to positive pressure ventilation if intubation is required (4 marks)

**Syllabus topic/section:** 2.1.5 Respiratory Intensive Care: Pleural disease including bronchopleural fistula and mechanical ventilatory support

### Discussion:

Part a) many candidates failed to appreciate that this can often be a self-limiting and benign condition and is not always a critical emergency. Candidates that scored less well tended to focus on the airway via an ABC approach to resuscitation rather than addressing the questions asked which was management of the subcutaneous emphysema. Candidates that scored well understood that many of these complications spontaneously resolve with minimal intervention, high FiO<sub>2</sub>, positioning and close observation. They recognised that highly invasive therapy is rarely required and included a multidisciplinary approach with surgical/bronchoscope techniques to aid management of the emphysema.

Part b) most candidates were able to provide a basic safe ventilatory strategy. Answers in this part could have been improved by recognising the risk of deterioration and outlining how this could be managed with preparation prior to ventilation and specific management of a persistent air leak. Candidates with the highest scores were specific in their management and outlined their rationale.

Angoff score for this SAQ	4.64
Highest candidate score achieved	7.00
Angoff pass rate	47.0%

## Question 10

- a. Discuss the features of an ideal electronic Clinical Information System (CIS) (7 marks)
- b. List the ways electronic drug prescribing can contribute to improving critical care safety and quality outcomes (3 marks)

**Syllabus topic/section:** 2.1.1 Structure and Process L2

### Discussion:

CIS systems are used every day in clinical practice, and an entire chapter is devoted to this aspect of intensive care in T.E.Ohs textbook. Most candidates can describe the ideal CIS features in user experience and system integration. The better candidates discussed the application of data and system safety aspects as well as drug prescription. Answers which concentrated on drug prescription only had insufficient depth in their answers and were marked accordingly.

The strategies to improve could involve elaboration on application aspects e.g., research and audit; and elaboration on safety of the system e.g., user access and downtime issues. For electronic drug prescription, not many candidates recognised the improvement in legibility as well as the specific safety features to reduce unsafe prescription for known drug allergy and drug interactions.

Candidates are reminded to look at the distribution of marks in the SAQ as this will guide the allocation of time and content required. Some candidates wrote answers that were more complete for a part b. (3 marks) that contained less marks than part a. (7 marks).

Part b successful answers contained structured lists and highlighted the essential aspects of the CIS in sufficient depth such as decision support systems and medication reconciliation.

Angoff score for this SAQ	5.27
Highest candidate score achieved	7.50
Angoff pass rate	26.5%

## Question 11

A 45-year-old patient with a body mass index (BMI) of 52 kg/m<sup>2</sup> is admitted to ICU intubated after a large ventral hernia repair. The procedure was uneventful.

Discuss the specific challenges that may impact on the management of this patient in the first 24 hours of ICU admission. In your answer include strategies to address these factors.

(10 marks)

**Syllabus topic/ section:** 2.1.18 Perioperative Issues in Intensive Care, 2.1.16 Populations requiring special considerations in Intensive Care.

### Discussion:

Successful candidates were able to provide targeted strategies relevant to morbid obesity AND the correct operation AND on an intubated patient. Reading the stem correctly is key to successfully addressing any SAQ.

Successful answers were noted for their structure. The following is an example of a successful structure, providing both comprehensive yet targeted approach. It is only one of many successful answers and potential approaches.

Challenges classified under the following broad headings:

- Recovery from anaesthesia/ sedation in the ICU (including extubation plan)
- Related to surgical procedure and complications
- Related to obesity (including assessment challenges, logistics, staffing resources, pressure care, dosing challenges)

The rubric is provided to guide the candidate in future study.

	<b>Below standard</b>	<b>At standard</b>	<b>Above standard</b>
<p>Discuss the specific challenges that may impact on the management of this patient in the first 24 hours of ICU admission.</p> <p>In your answer include strategies to address these factors.</p> <p><b>(10 marks)</b></p>	<p>Generic discussion without contextualising to the patient.</p> <p>Limited outline of challenges and/or strategies for management:</p> <p><b>and/or</b></p> <p>Lacking in detail of specific challenges and/or strategies to address</p> <p><b>and/or</b></p> <p>Does not include morbid obesity related issues in challenges.</p>	<p>Answer referenced to specific patient/scenario.</p> <p>Outlines numerous challenges and includes multiple (not all) of the challenges highlighted in bold.</p> <p><b>and</b></p> <p>Includes strategies to address majority of challenges outlined.</p> <p><b>and</b></p> <p>Must include outline of morbid obesity related challenges.</p>	<p>At standard <b>PLUS</b></p> <p>Clearly structured.</p> <p>Answered in context of clinical case with emphasis on the obesity.</p> <p><b>and</b></p> <p>Outlines majority of challenges highlighted in bold +/- additional challenges.</p> <p>Includes non-obesity related challenges as well as those related to morbid obesity.</p> <p>Provides strategies to address majority of challenges outlined.</p> <p><b>and may include</b></p> <p>Outline of clinical difficulty in “competing physiology and needs”, such as need for analgesia vs extubation</p>
	<b>0 – 4.5 marks</b>	<b>5.0 – 7.0 marks</b>	<b>7.5 – 10 marks</b>

Angoff score for this SAQ	5.50
Highest candidate score achieved	8.25
Angoff pass rate	69.9%

## Question 12

### Question 12.1

An 81-year-old-patient is admitted to the ICU with a 24-hour history of altered mental state and confusion. The patient has a history of type II diabetes managed with metformin.

The following blood results were taken on admission.

Arterial blood	Patient	Reference
pH	<b>7.30*</b>	7.35-7.45
PCO <sub>2</sub>	<b>31 mmHg* (4.0 kPa)</b>	35-45 (4.6 -6.0)
PO <sub>2</sub>	90 mmHg (12.0 kPa)	
HCO <sub>3</sub> <sup>-</sup>	<b>20 mmol/L*</b>	22-26
Na <sup>+</sup>	140 mmol/L	135 -145
K <sup>+</sup>	3.9 mmol/L	3.5-5.0
Cl <sup>-</sup>	<b>105 mmol/L*</b>	95-105
Urea	<b>21.8 mmol/L*</b>	3.0-8.0
Creatinine	<b>220 umol/L*</b>	45-90
Glucose	<b>40 mmol/L *</b>	3.5-6.0
Lactate	<b>4.8 mmol/L *</b>	.5-1.6

- a. Give the clinical condition most consistent with the above data. Justify your answer from the results provided.

(2 marks)

- b. List three complications of this condition.

(1.5 marks)

### Question 12.2

These are the biochemical results taken from a 50-year-old patient, found collapsed at home. The patient was missing from an alcohol rehabilitation program. Blood was drawn for investigation.

Parameter	Patient	Reference
Na	<b>126 mmol/L*</b>	135 - 145
K	3.5 mmol/L	3.5 - 5.0
Urea	<b>7.0 mmol/L*</b>	
Creatinine	<b>250 umol/L*</b>	45-90
Urea	7.0 mmol/L	3.0 – 8.0
Bilirubin (Total)	<b>509 umol/L*</b>	<26
Protein (Total)	<b>40 g/L*</b>	60 - 80
Albumin	<b>20 g/L*</b>	38 - 48
Alkaline phosphatase (ALP)	<b>153 U/L*</b>	30 - 110
γ-Glutamyl transferase (GGT)	<b>459 U/L*</b>	<40
Alanine transferase (ALT)	<b>336 U/L*</b>	<35
Creatinine Kinase (CK)	<b>400 U/L*</b>	55 - 170
TroponinT	<b>0.1 mcg/IL*</b>	0.00 - 0.03
Glucose	<b>3.2 mmol/L*</b>	3.5 – 6.0
Ammonia	<b>342 umol/L*</b>	0 - 50
Lactate	<b>3.7 mmol/L*</b>	0.5 – 1.6

Based on these results,

- a. Explain the most likely cause of the reduced conscious state. Justify your response (1.5 marks)
- b. List other investigations that would support the diagnosis. Justify your response (2 marks)
- c. Outline the significance of the high plasma creatinine but normal urea concentrations (3 marks)

**Syllabus topic/section:** 2.1.9 Endocrine Intensive Care, 2.1.6 Gastrointestinal Intensive Care

**Discussion:**

This is a repeat question, and most candidates did well detailing the rationale for HHS and listing complications in 12.1.

Likewise, most candidates were familiar with hepatic encephalopathy and investigations to support the diagnoses in 12.2. Many candidates would benefit from revising the urea creatinine ratios and the significance. Most candidates lost marks here.

Angoff score for this SAQ	6.14
Highest candidate score achieved	8.50
Angoff pass rate	34.9%

### Question 13

A 34-year-old patient is admitted to the ICU with suspected tetanus.

- a. Outline the features on assessment that would support this diagnosis. (4 marks)
- b. Outline your management of generalised tetanus including the management of anticipated complications. (6 marks)

**Syllabus topic/section:** 2.1.3 Sepsis and Infections. L1 Condition - Rarer Infections with specific ICU considerations.

#### Discussion:

Part a) of this question was not answered adequately by most candidates, however answers for part b) made up for the deficiencies. Candidates are reminded that the glossary term "assessment" includes consideration of elements in the patient's history. Candidates are also reminded to read the questions closely, as many did not address the management of anticipated complications.

Candidates did well in assessment if they mentioned the characteristics of a tetanus prone wound, explored the vaccination history and alluded to the incubation period. Above standard answers included the clinical features of different types of tetanus, described the initial features, the non-specific findings, and included features of autonomic dysfunction in severe cases. Above standard answers included serum antitoxin levels in the investigation plan to check vaccination status, in addition to microbiology of wounds, if any.

A well-structured management plan that detailed resuscitation and specific management and included details such as preventing and treating complications like spasms and autonomic dysfunction and mentioned debridement, source control, neutralisation with HTIG and the dose and the choice and duration of antibiotics, role of adequate hydration and nutrition and management of late complications, was considered above standard.

As this was a knowledge based question, answers could be improved by revision of knowledge of relatively less common but clinically important conditions as outlined in the syllabus (necrotising soft tissue infections, streptococcal toxic shock, bacterial and viral meningitis and encephalitis, endocarditis, cerebral malaria, tetanus, melioidosis, dengue shock syndrome, toxoplasmosis, cryptococcus, botulism).

Angoff score for this SAQ	5.27
Highest candidate score achieved	8.50
Angoff pass rate	57.8%

## Question 14

With respect to acute right ventricular dysfunction (RVD) post emergency coronary artery bypass grafting (CABG) surgery:

- a. List **six** causes of RVD in this scenario (3 marks)
- b. Outline the management principles of RVD in this scenario (7 marks)

**Syllabus topic/section:** 2.1.8: Perioperative issues in intensive care. L1 Peri-operative topics: Cardiac surgery: including sternotomy for bypass grafting, valve surgery and aortic surgery

### Discussion:

Overall candidates did well in answering part a) of this question. Candidates should note that if a list of 6 is asked for to not provide more than 6 as only the first 6 counts towards the allocated marks. Candidates are reminded that management principles do not include assessment (candidates wasted time on assessment that could have been spent more productively). Management principles require some explanation and justification, not just a list of available inotropes.

Examples of differentials that would score marks included some preload issues such as hypovolemia or valvular regurgitation, contractility issues such as myocardial stunning from prolonged CPB, or afterload issues (pulmonary vasoconstriction from hypercarbia, hypoxia, acidosis etc). Examples of improbable differentials for RV failure after CABG that were provided included massive PE, septic cardiomyopathy, 'residual cardioplegia' which did not attract any marks. Candidates are reminded to be specific in their answers – the causes needed to be related to cardiac surgery as the stem suggested.

Answers to part b) could be improved by structuring the answer to cover aspects of management principles including ventilation strategies, challenges in volume management, use of inotropes and pulmonary vasodilators. Better answers also included considerations of mechanical support and surgical strategies, management of arrhythmias and underlying causes. Below standard answers did not demonstrate an understanding of challenges in volume management and did not include ventilation strategies.

Angoff score for this SAQ	5.41
Highest candidate score achieved	8.00
Angoff pass rate	55.4%

### Question 15

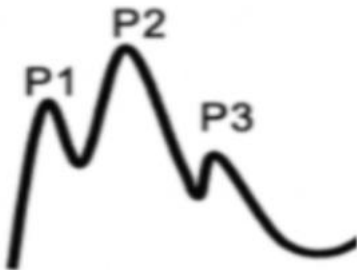
a. Regarding the intracranial pressure waveform pictured below:

i. What is indicated by the labels P1, P2 and P3?

(3 marks)

ii. Interpret this waveform.

(1 mark)



b. You are called to the bedside of a patient who was admitted to ICU following a traumatic brain injury. The patient is sedated and intubated with an external ventricular drain (EVD) in situ. The EVD has stopped draining and no waveform is visible on the monitor.

Outline your assessment to determine the cause

(6 marks)

**Syllabus topic/section:** 2.1.8 Neurological Intensive care. L1 Topic: Intracranial pressure monitoring.

#### Discussion:

This question was on a core ICM topic. Overall, most candidates had a reasonable knowledge of the topic.

If candidates knew the names of waveforms and their clinical significance to answer part a) they scored full marks giving them enough time to answer the rest of the question.

For part b) a systematic approach worked well as it gave the impression of having done this previously. History, Examination and Investigations as headings following the glossary worked well. Candidates are reminded that giving specific detail according to the time allocation is also important. Providing enough detail to allow for 6 minutes is what was expected in this section. Therefore, those who gave details of the troubleshooting of an EVD from patient to monitor and everything in between including manoeuvres (eg temporarily dropping and/or flushing if safe), examined the patient for features of raised ICP and examined the monitor from EVD tip to transducer and beyond (e.g. re-zeroing, leveling, examining the meniscus for transmitted venous pulsatility, looked for clots, kinks, turned off taps, cables) scored well.

Angoff score for this SAQ	5.86
Highest candidate score achieved	8.50
Angoff pass rate	61.4%

## Question 16

Regarding new onset atrial fibrillation (AF) in haemodynamically stable patients in the ICU:

- a) List **six** potential causes/precipitants of AF (3 marks)
- b) Discuss “Rate control” versus “rhythm control” management strategies (4 marks)
- c) Outline your approach to anticoagulation (3 marks)

**Syllabus topic/section:** 2.1.4 Cardiovascular Intensive Care. L1 Topic: Cardiac arrhythmia. 2.1.21 Applied Pharmacology in Intensive Care. Haem

### Discussion:

Part a) required a simple list of relevant precipitants/causes of atrial fibrillation (AF). Most candidates performed well in this section.

Candidates are reminded to pay attention to the number of answers requested in the question. If six answers are requested, then only the first six answers will be considered.

Part b) utilised the glossary terms “discuss” and “management.” Candidates often scored well by structuring their answers around the expanded definitions of these glossary terms. Successful responses included an individualised approach and incorporated preferred options based on patient characteristics.

Part c) asked for an “outline” or summary of the important points regarding anticoagulation in a haemodynamically stable patient with **new-onset** AF in the **ICU**. High-scoring answers included discussions about balancing the increased risks of thromboembolism and bleeding (noting the lack of validation of risk scoring in the ICU), the timing of initiation, and the factors influencing the choice of anticoagulant agent (such as reversibility and pharmacokinetics).

Angoff score for this SAQ	6.18
Highest candidate score achieved	8.00
Angoff pass rate	22.9%

## Question 17

Outline your assessment for a suspected smoke inhalational injury in a patient who has presented with severe burns.

(10 marks)

**Syllabus topic/section:** 2.1.14 Environmental Injuries and Toxicology in ICU. L1 Conditions: Burns

### Discussion:

Candidates who did well provided a structured answer, utilising the framework of the expanded glossary term, with details specific to the assessment of smoke inhalation. They included features on the history about the aetiology of burns that would make inhalation more likely, as well as patient risk factors and reasons why they may have a reduced LOC at the scene (e.g., alcohol, trauma, hypoxia or drugs). All of which increase the risk of inhalational injury. As the only specific investigation for inhalational injury, candidates needed to mention the role of bronchoscopy post intubation, FNE alone did not attract the same level of marks.

Many candidates who scored less well either provided a generic trauma and/or burns assessment or missed important features in the history or on examination, like voice change or stridor and singeing or burns to the face and mouth. The rationale for investigations like an ABG or CXR/CT was important to ensure candidates understood why they were ordering them in this situation.

Angoff score for this SAQ	5.59
Highest candidate score achieved	7.50
Angoff pass rate	16.9%

## Question 18

A patient has been referred from the Emergency Department with a CT Pulmonary Angiography (CTPA) proven saddle pulmonary embolus (PE) in the context of a recent overseas flight. The following clinical information is available:

- Heart rate 90/min (SR), BP 110/65 (unsupported)
- Respiratory rate 20/min, SpO2 93% via nasal prong oxygen at 4 L/min
- Transthoracic echocardiography (TTE): Moderate right ventricular systolic dysfunction
- Serum troponin mildly elevated

a) Give the risk stratification of the PE. In your answer, provide your rationale (2 marks)

b) Discuss the specific initial treatment options for this patient (8 marks)

**Syllabus topic/section:** 2.1.5 Respiratory Intensive Care. L1 Conditions: Pulmonary embolism; 2.1.4 Cardiovascular Intensive Care. L1 Conditions: Pulmonary hypertension + Thrombotic disease.

### Discussion:

Part a) was easily answered with reference to well-known definitions. Higher marks were scored for those able to articulate risk stratification clearly. The question specified risk stratification of **the** (clinically described) PE rather than **a** PE. Many candidates provided a generic list defining categories of PE, without specifying which category applied to **this** patient.

Part b) used the glossary term “discuss”. Many candidates scored well by framing their answer around the expanded definition of “discuss”. Candidates scored less well if their answer was more aligned with “critically evaluate” or “management” glossary terms. A clear understanding of the benefit and evidence base for more interventional therapies was awarded high marks.

Candidates might consider time management strategies like highlighting key words within the text of the question. Many candidates wasted precious time by describing non-specific, general supportive treatment, which was specifically not asked for, and so did not attract marks.

The rubric is provided to guide the candidate in future study.

	<b>Below Standard</b>	<b>At Standard</b>	<b>Above standard</b>
a) Risk stratification and rationale <b>(2 marks)</b>	Incorrect or incomplete answer	Designated as intermediate- high risk PE  <b>OR</b> Sub-massive acceptable (although terminology superseded in AHA)  With correct rationale for full marks	At Standard <b>PLUS</b>  Distinguishes “intermediate-high” from “intermediate-low risk”  <b>OR</b> Discusses interface/overlap with PESI (or other appropriate scoring system)
	<b>0 - 0.5 marks</b>	<b>1 - 1.5 marks</b>	<b>2 marks</b>

<p>b) Discuss the initial specific treatment options <b>(8 marks)</b></p>	<p>Superficial answer <b>OR</b> with inadequate detail  <b>OR</b> incorrect statements.</p>	<p>Must mention:  Therapeutic anticoagulation <b>AND</b>  at least 2 of the following four “aggressive” options:  <b>1.</b> systemic thrombolysis (full dose) <b>2.</b> systemic thrombolysis (reduced dose) <b>3.</b> catheter-directed therapy <b>4.</b> surgical thrombectomy  with a discussion of these options: e.g.  Must include <b>SOME</b> rationale, advantages and disadvantages for full marks</p>	<p>At Standard <b>PLUS</b>  Comprehensive discussion of options:  May Include mention of the available evidence as it relates to chosen treatments  May include sophisticated consideration of factors that would influence decision making  May include mention of objectives to reduce mortality (i.e. progression to “high risk”/” massive” PE) AND CTEPH reduce risk of long-term RV impairment</p>
	<p><b>0 - 3.5 marks</b></p>	<p><b>4 - 6 marks</b></p>	<p><b>6.5 - 8 marks</b></p>

Angoff score for this SAQ	5.77
Highest candidate score achieved	9.00
Angoff pass rate	34.9%

### Question 19

Compare and contrast community-acquired MRSA (CA-MRSA) and hospital-acquired MRSA (HA-MRSA) under the following headings:

- a) Toxin production (2 marks)
- b) Clinical features (4 marks)
- c) Antimicrobial therapy (2 marks)
- d) Risk factors for developing infection (2 marks)

**Syllabus topic/section:** 2.1.3 Sepsis and Infections

#### Discussion:

This was a recall of content question to assess factual knowledge about MRSA. MRSA is an extremely important topic given its differing aetiology, resistance patterns, infection control strategies and clinical presentations. Candidates who appreciated resistance patterns (beta lactam only in CA-MRSA vs MDR in HA-MRSA) and could illustrate their answers with examples and correct justifications did well.

Angoff score for this SAQ	4.73
Highest candidate score achieved	7.50
Angoff pass rate	57.8%

## Question 20

### Question 20.1

A 37-year-old patient presents to the Emergency Department. The patient's Glasgow coma score (GCS) is 3 and they are haemodynamically stable.

#### The biochemistry is as follows:

Parameter	Patient	Reference
Sodium	140 mmol/L	135 – 145
Potassium	3.9 mmol/L	3.5 – 5.0
Chloride	104 mmol/L	95 – 105
Bicarbonate	<b>8 mmol/L *</b>	22.0 – 26.0
Glucose	<b>6.3 mmol/L*</b>	3.5 – 6.0
Urea	3.9 mmol/L	3.0 – 8.0
Creatinine	<b>112 µmol/L *</b>	45 – 90
Magnesium	0.84 mmol/L	0.75 – 0.95
Albumin	43 g/L	35 – 50
Protein	78 g/L	60 – 80
Ionised calcium	1.17 mmol/L	1.10 – 1.35
Calcium corrected	2.38 mmol/L	2.12 – 2.62
Osmolality (measured)	<b>326 mmol/kg *</b>	275-295

#### Arterial blood gas is as follows:

Parameter	Patient	Reference
FiO <sub>2</sub>	0.21	
pH	<b>7.3 *</b>	7.35-7.45
PCO <sub>2</sub>	<b>18 mmHg * (2.3 kPa)</b>	35-45 (4 -6.0)
PO <sub>2</sub>	<b>67 mmHg * (8.9 kPa)</b>	70-100
Bicarbonate	<b>9 mmol/L *</b>	22.0 – 26.0
ABE	<b>-15.9 mmol/L *</b>	-3-+3
Lactate	4.2 mmol/L *	<3.0

- a) Explain the abnormalities. In your answer, show your calculations (2 marks)
- b) List **three** possible causes of these results (1.5 marks)
- c) List **four** other investigations which would assist in the diagnosis: (2 marks)

### Question 20.2

An 81-year-old patient is found to be acutely confused with tachypnoea. Oxygen saturations are 96% on room air and the patient's respiratory rate is 28 breaths/min. They are haemodynamically stable, with a urine output of 15 mls/hour for the last 3 hours.

The patient has been in hospital for 4 weeks being treated for methicillin- sensitive Staphylococcus Aureus (MSSA) mitral valve infective endocarditis with intravenous flucloxacillin.

**Biochemistry is as follows:**

Parameter	Patient	Reference
Sodium	<b>147 mmol/L *</b>	135 – 145
Potassium	3.7 mmol/L	3.5 – 5.0
Chloride	<b>112 mmol/L *</b>	95 – 105
Bicarbonate	<b>11 mmol/L *</b>	22.0 – 26.0
Glucose	3.9 mmol/L	3.5 – 6.0
Urea	<b>17.7 mmol/L *</b>	3.0 – 8.0
Creatinine	<b>284 µmol/L *</b>	45 – 90
Magnesium	0.8 mmol/L	0.75 – 0.95
Albumin	<b>25 g/L *</b>	35 – 50
Protein	<b>59 g/L *</b>	60 – 80
Total bilirubin	12 µmol/L	< 26
Aspartate transferase (AST)	38 U/L	< 35
Alanine transferase (ALT)	15 U/L	< 35
Alkaline phosphatase (ALP)	<b>200 U/L *</b>	30 – 110
γ-Glutamyl transferase (GGT)	<b>110 U/L *</b>	< 40
Calcium corrected	2.29 mmol/L	2.12 – 2.62
Phosphate	<b>2.4 mmol/L *</b>	0.8 – 1.5
Creatine Kinase	26 U/L	0-140

**Arterial blood gas analysis:**

Parameter	Patient	Reference
pH	<b>7.18 *</b>	7.35-7.45
PaCO <sub>2</sub>	<b>23 mmHg * (3 kPa)</b>	35-45 (4.6-6.0)
PaO <sub>2</sub>	<b>80 mmHg * (10.6 kPa)</b>	80-100
Bicarbonate	<b>11 mmol/L *</b>	22.0 – 26.0
Base Excess	<b>-20 mmol/L *</b>	-3.0+3.0
Lactate	1.2 mmol/L	<3.0
FiO <sub>2</sub>	0.21	

- a) Explain the abnormalities. In your answer, show your calculations (2 marks)
- b) Provide the most likely diagnosis (0.5 mark)
- c) Give **one** investigation which would assist in confirming the diagnosis (0.5 mark)
- d) List **three** risk factors for development of this diagnosis (1.5 marks)

**Syllabus topic/section:** Section 2.1.14 Environmental Injuries and Toxicology in ICU, 2.1.7 Renal Intensive Care

**Discussion:**

Candidates did better if they had a system, showed their workings (e.g. AG, delta gap) and didn't re-write the abnormalities but interpreted them i.e. not just mentioned increased creatinine urea ratio but identified the cause as consistent with an acute kidney injury.

Generic statements did not gain as many marks as specific interpretations, e.g., “altered LFTs” gained less marks than ‘mild cholestasis”.

Angoff score for this SAQ	6.86
Highest candidate score achieved	9.50
Angoff pass rate	54.2%

## Question 21

Outline your approach to the planned extubation of an adult patient in your ICU who is known to have an anatomically difficult airway.

(10 marks)

**Syllabus topic/section:** Section 2.1.5 Respiratory Intensive Care, 2.1.19 Intensive Care procedures

### Discussion:

This is a fundamental topic in intensive care medicine, and a high standard was expected.

Successful responses demonstrated a broad approach encompassing general assessment and a detailed extubation process that included risk assessment, logistics, equipment, and personnel considerations. In addition, the successful responses clearly outlined the actual steps involved in extubation and included airway assessment beyond previous intubation details. Post extubation care was well covered by successful answers discussing physiotherapy, monitoring, patient positioning and oxygen delivery methods, while also defining clinical endpoints for early intervention should extubation fail.

Less successful answers lacked sufficient depth and detail. A common issue was the omission of a comprehensive airway assessment prior to extubation, with some candidates relying exclusively on prior intubation details being sufficient for airway assessment. Several responses did not provide adequate detail regarding equipment and procedural planning. Statements such as “have the difficult airway trolley available” or “always extubate in the operating theatre” were considered insufficient, as they fail to demonstrate the depth of knowledge and structured approach expected of a transitional fellow. In addition, staffing, environmental, and logistical considerations were frequently overlooked. Assessment of cough strength, secretion management, and overall physical readiness was often missing, and some candidates placed undue emphasis on sedation strategies, such as the use of dexmedetomidine, as a substitute for neurological assessment of a difficult airway extubation or post-extubation care planning.

The rubric is provided to guide the candidate in future study.

<b>Below standard</b>	<b>At standard</b>	<b>Above standard</b>
<p>Does not demonstrate plan for appropriate assessment prior to any planned extubation.</p> <p>Disorganised approach, lacking in structure required to safely plan and undertake extubation.</p> <p>Described approach includes unsafe elements <b>and/or</b> Approach omits vital components required for patient safety. <b>and/or</b> Inadequate detail of planned assessment, or key elements of assessment (e.g., airway assessment, strength) <b>and/or</b> Omissions in important components of planning, preparation, performance or post-extubation care</p> <p><b>0 - 4.5 marks</b></p>	<p>Demonstrates/outlines appropriate assessment plan.</p> <p>Organised, safe approach to planning/preparation, performance AND post-extubation care.</p> <p>Description of general pre-requisites, airway assessment, and risk factors for failed extubation included.</p> <p>Clear description of preparation of equipment, personnel for extubation.</p> <p>No unsafe elements.</p> <p><b>5 – 7.5 marks</b></p>	<p><b>At standard PLUS</b></p> <p>Well organised and structured approach in more detail</p> <p>Includes specific details of assessment, planning, preparation, performance and post-extubation care for THIS patient.</p> <p>Includes communication plan/consideration.</p> <p>No unsafe elements.</p> <p><b>8 -10 marks</b></p>

Angoff score for this SAQ	5.23
Highest candidate score achieved	7.75
Angoff pass rate	27.7%

## Question 22

a) List patient-related factors that increase the likelihood of developing complications from neutropenic sepsis (3 marks)

b) Outline your assessment of a patient presenting with neutropenic sepsis (7 marks)

**Syllabus topic/section:** 2.1.3 Sepsis and infections

### Discussion:

Part a) was misinterpreted by many candidates as being what would *lead to* neutropenic sepsis, rather than risks of *developing complications*. Candidates did well if they listed patient-related factors instead of listing general risk factors and understood risks of significant neutropenia complications e.g. duration of neutropenia, advanced malignancy, comorbidities, ECOG status, age

Part b) Candidates generally answered well if they provided an overview supported by specifics of neutropenic sepsis with the following:

- Included clinical perspective in their answer e.g. assessment can be challenging due to range of causes and lack of localising symptoms.
- Included features in history relevant to timing/agents for chemo and exposures to opportunistic pathogens.
- Relevant exam — describing features they examine for specifically in each system — e.g. abdomen: look for features suggestive of colitis.
- Detail in investigation relevant to opportunistic infections e.g. viral/ fungal infections.
- And how they would do blood cultures e.g. at least 2 sets, 1 from invasive lines if present.
- Understood likely presentations e.g. colitis, CLABSI, meningoenitis, mucositis, perianal infections, and that clinical signs may be muted due to neutropenia.

Angoff score for this SAQ	5.45
Highest candidate score achieved	8.75
Angoff pass rate	62.7%

## Question 23

Regarding use of balloon tamponade devices (e.g. the Sengstaken-Blakemore or Minnesota tube) for variceal upper gastrointestinal bleeding:

- a) Outline the key steps in blind emergency insertion of this device in the ICU emphasising the safety considerations (7 marks)
- b) Outline your strategy for removal of this device in ICU (3 marks)

**Syllabus topic/section:** 2.1.6 Gastrointestinal Intensive Care LI Topic: Acute Gastro-Intestinal Bleeding

### Discussion:

This question sought to explore knowledge not just of the process of insertion of a balloon tamponade device, but of the rationale for the process. Even though many candidates' answers mention the steps involved in the placement and removal of these devices, it would seem many candidates have little or no experience in managing a balloon tamponade device, the sequence of insertion and removal if incorrect has significant safety implications.

Part a) As an 'outline' question, a list of the steps was a good start but not enough to meet standard. Many candidates did not adequately address the safety considerations aspect of the question. Careful use of language would improve many answers to this question. Noncommittal phrases such as 'if necessary' don't convey actions to the examiner. Conditional language such as 'ideally' or 'if possible' similarly leave the examiner guessing e.g., 'ideally intubated' or 'intubate if possible'. If writing 'do X if necessary' candidates do better if they share with the examiner how you will determine if X is necessary, and state what you would do and why e.g., 'High risk of aspiration both with variceal bleeding and insertion of SB tube - intubate to protect airway and allow patient sedation.' Candidates achieve above standard if they provided well-structured and comprehensive description for insertion and safety concerns are highlighted to reduce the risk of aspiration, oesophageal perforation and necrosis.

Part b) 'Outline your removal strategy' invites candidates to demonstrate a focus on goals rather than tasks. Many candidates did not recognise that a 'strategy for removal' is more than a list of steps for removal. Candidates are at standard if they are able to provide a stepwise strategy for deflation of oesophageal followed by gastric balloon prior to removing the balloon tamponade device. A detailed description of the clinical factors to be monitored during the deflation and removal process along with the relevant caveats would place the candidates above standard.

The rubric is provided to aid the candidate in future study.

	<b>Below standard</b>	<b>At standard</b>	<b>Above standard</b>
a) (7 marks)	<p>Lack of systematic steps for insertion of MT or includes incorrect steps for tube insertion.</p> <p>Safety concerns not adequately highlighted.</p> <p>Inadequate insight into avoiding oesophageal necrosis/perforation.</p> <p><b>0-3 marks</b></p>	<p>Appropriate description of MT insertion with most safety concerns adequately highlighted but some details missing.</p> <p>Must show insight into/mention steps to prevent oesophageal necrosis/perforation as complications.</p> <p><b>3.5-5 marks</b></p>	<p><b>At standard PLUS</b></p> <p>Well-structured and comprehensive description for insertion of an MT.</p> <p>Safety concerns highlighted to reduce the risk of aspiration, oesophageal perforation and necrosis.</p> <p>Includes some detail about the tube itself for example the volumes/pressure for inflation and/or the structure of the tube</p> <p><b>5.5-7 marks</b></p>

<p>b) (3 marks)</p>	<p>Does not provide a logical stepwise strategy for removal of MT.</p> <p>No or little insight into sequential deflation of oesophageal followed by gastric balloon.</p> <p>Limited mention of clinical monitoring for bleeding post deflation</p> <p><b>0-1 marks</b></p>	<p>Provides a stepwise strategy for deflation of oesophageal followed by gastric balloon prior to removing the MT.</p> <p>The relevant steps provided are in the appropriate order. Some clinical factors that should be monitored during each step are included.</p> <p><b>1.5-2 marks</b></p>	<p><b>At standard PLUS</b></p> <p>Includes more details and rationale for progression to the next step during the removal process.</p> <p>Includes a more detailed description of the clinical factors to be monitored during the deflation and removal process along with the relevant caveats.</p> <p><b>2.5-3 marks</b></p>
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Angoff score for this SAQ	4.59
Highest candidate score achieved	8.00
Angoff pass rate	28.9%

## Question 24

With regards to conducting research within the ICU:

- a) Outline the potentials barriers to obtaining informed consent (6 marks)
- b) Outline the alternative models of consent which may be used (4 marks)

**Syllabus topic/section:** 2.5.1 Research and Evidence Based practice in Intensive Care.

**Topic:** Ethical issues in performing research in the critically ill, including issues related to consent.

### Discussion:

Note the glossary term 'outline' which directs an answer requiring more than a list to be at standard. Many candidates failed to recognize that a key barrier to obtaining informed consent in ICU patients is the lack of decision-making capacity. Furthermore, most candidates appeared unaware of the various alternative methods available for obtaining consent for research purposes.

To be at standard, candidates needed to recognise and clearly state the concept of capacity, it's components and relate barriers to its components specific to ICU research. Candidates needed to demonstrate an understanding of the concept of informed consent. Consequently, simple statements e.g. 'patients are commonly sedated so cannot give consent' whilst alluding to capacity and barriers did not reach the required standard. Whilst no marks were deducted many candidates listed implied consent which has a limited, if any, role in ICU research given patients do not actively choose to be admitted to ICU but do so out of necessity. Therefore, to extrapolate that they consent to research on this premise is problematic. Waived consent - a different concept - is applicable if approved by ethics board e.g. observational trials. Some candidates mentioned escalation pathways (e.g. medical director, supreme court) which can have relevance in other situations but are unlikely to be used in gaining consent for enrolling a patient into an ICU research study. Some candidates listed valid reasons for families declining to consent e.g. concerns about interventions - this is not a barrier to obtaining consent but a valid outcome from the informed consent process. Logistical barriers such as language barriers / lack of staff did not attract high marks.

Angoff score for this SAQ	4.32
Highest candidate score achieved	6.25
Angoff pass rate	15.7%

## Question 25

A 58-year-old is admitted to ICU with respiratory failure and haemoptysis on a background of sinusitis.

- a) Outline the features on assessment that would support systemic vasculitis as the diagnosis for this presentation (8 marks)
- b) Outline the specific treatment options for systemic vasculitis in this setting (2 marks)

**Syllabus topic/section:** 2.1.10 Immunological and Rheumatological Intensive Care L2

### Discussion:

Successful candidates followed the direction of the glossary of terms. The instruction to “**outline features that would support the diagnosis**” requires a summary of the important points supporting a diagnosis of vasculitis *with a rationale* as to why these items point to this specified diagnosis.

Candidates who aligned specific tests results to specific diagnoses in their investigations also scored higher marks.

Candidates were less successful where they simply *listed* items without explanation. This was noticeable particularly in the investigations section but common to history and examination sections of assessment as well. It is worth noting that a biopsy is important for the diagnosis of vasculitis. This was an omission in many answers which would have improved individual marks. The use of IVIG as a first line therapy for the vasculitides was a common misunderstanding. Specific treatment options include immunosuppressants such as steroids, methotrexate, azathioprine or mycophenolate, immune modulators such as Rituximab or plasma exchange for severe disease.

Angoff score for this SAQ	5.18
Highest candidate score achieved	9.00
Angoff pass rate	73.5%

## Question 26

A 42-year-old patient is admitted to ICU following elective right adrenalectomy for pheochromocytoma. The patient is currently sedated and ventilated with an invasive blood pressure of 210/80.

- a) List the likely causes for this elevated blood pressure (3 marks)
- b) Outline your immediate and ongoing approach to management of the hypertension. In your answer, explain the rationale for any chosen pharmacological treatment(s) (7 marks)

**Syllabus topic/section:** 2.1.9 Endocrine Intensive Care

### Discussion:

In part a. the successful answers were context specific, targeting answer toward pheochromocytomas such as residual active tumour burden, inadequate hormonal blockage due to various causes and more general issues postoperatively.

For part b. the majority of candidates answered the question with sufficient details under the headings of resuscitation, definitive treatment, initial and ongoing monitoring and supportive treatment as stipulated in the glossary of terms management definition.

Some answers could have scored higher marks by addressing specific management issues in the context of post op pheochromocytoma, for example the requirement for alpha blockade and timing with beta blockade. Lacking these details and/or the inability to specify a rationale for choosing antihypertensive agents were features of the less successful answers. Candidates are reminded to read ALL parts of the question as easy marks were lost by not supplying the rationale as requested in the stem.

Angoff score for this SAQ	5.23
Highest candidate score achieved	9.00
Angoff pass rate	72.3%

## Question 27

- a) List five intra-abdominal complications of severe acute alcoholic necrotising pancreatitis (2.5 marks)
- b) For each of the above, outline the specific management (7.5 marks)

**Syllabus topic/section:** 2.1.6 Gastrointestinal Intensive Care

### Discussion:

Most candidates passed this question. High scoring candidates provided specific intra-abdominal complications of severe acute necrotising alcoholic pancreatitis and their specific management. Complications specific to severe acute alcoholic necrotising pancreatitis included infected necrosis, pseudocysts, splanchnic venous thrombosis, bleeding pseudoaneurysms and mechanical mass effects eg, gastric, biliary or intestinal outlet obstruction syndromes. There are many more.

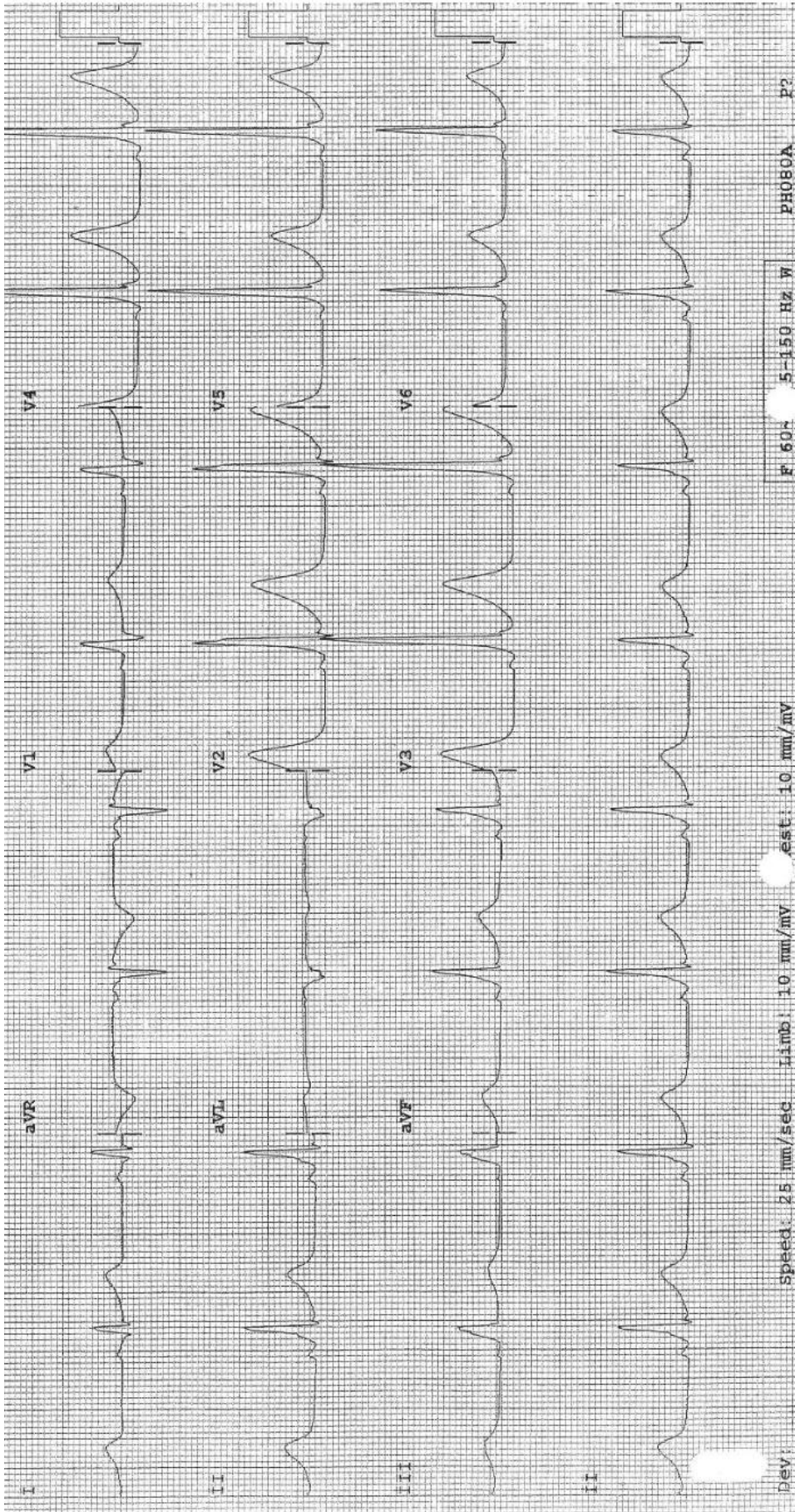
Candidates that did not score highly did not follow the instructions in the SAQ and provided non-specific complications and general supportive care in their answer. Other candidates would have scored higher if they had provided more detail to their correctly nominated complications,

For example, regarding pseudoaneurysms most candidates listed bleeding pseudoaneurysm but did not address preventive angio-embolization. Answers that included infected pseudocysts could have scored more marks if they included the indications and controversies regarding antibiotics and the difficulties in making a diagnosis of infection in a pro-inflammatory patient.

Angoff score for this SAQ	5.77
Highest candidate score achieved	9.00
Angoff pass rate	51.8%

Question 28

28.1 Examine the ECG provided:



- a) List the abnormalities and provide the most likely diagnosis (2 marks)
- b) List two drugs which are contraindicated in this diagnosis and explain why (2 marks)
- c) List two complications of this diagnosis (1 mark)

## 28.2

A patient is admitted to the ICU following an elective Aortic Valve replacement for Aortic Stenosis. Within two hours of admission the patient is hypotensive with a blood pressure of 70/30 (mean 43mm/Hg) and is on an adrenaline infusion at 10mcg/min.

Based on the below echocardiogram report:

- a) Explain the cause of this patient's hypotension (1 mark)
- b) Outline the principles of management of this patient's hypotension (4 marks)

**(Abnormal values are shown in bold)**

### LEFT VENTRICULAR EVALUATION

**Small LV cavity size.** Normal systolic function (EF 60%). No regional wall motion abnormalities.  $E_{a} = 4$  cm/s. **Moderate to severe concentric LV hypertrophy. Flow acceleration noted in LVOT on colour Doppler.**

### LEFT ATRIUM

**Mildly enlarged. LA area 26 cm<sup>2</sup>**

### RIGHT VENTRICLE

Normal size and systolic function

### RIGHT ATRIUM/IVC

Normal.

### AORTIC ROOT

Normal

### MITRAL VALVE

Structurally normal mitral valve; **Systolic anterior motion of the valve leaflets. Moderate mitral regurgitation.** E-wave 0.8 m/s; A-wave 0.5 m/s; Deceleration time 196 ms

### AORTIC VALVE

Prosthetic aortic valve is well seated. Trivial paravalvular regurgitation.

**LVOT: Max vel 5.0 m/s; Mean vel 3.5 m/s;**

**Max pressure gradient 100 mm Hg; Mean pressure gradient 49 mm Hg**

**AV: Max vel 5.1 m/s; Mean vel 3.7 m/s;**

**Max pressure gradient 104 mm Hg; Mean pressure gradient 55 mm Hg**

### TRICUSPID VALVE

Normal tricuspid valve. E-wave 0.3 m/s; Mild regurgitation; TR vel 2.0 m/s

## PULMONIC VALVE

Normal pulmonic valve

### **28.1**

**Syllabus topic/section :**2.1.4 Cardiovascular Intensive Care **L1**

### **28.2**

**Syllabus topic/section:** 2.1.18 Peri-operative Issues in Intensive Care **L1**

#### **Discussion:**

Most candidates answered this straightforward question well.

**28.1** Most candidates could interpret the ECG as WPW syndrome, could enumerate two drugs that are contraindicated and two complications of this diagnosis.

**28.2** LVOTO post AVR. Most candidates had a good grasp of SAM.

Candidates who scored less were confused about afterload management in LVOTO and inaccurately mentioned afterload reduction with vasodilators and /or IABP as one of the management principles.

Candidates who scored well mentioned both medical management and surgical option. In the medical management- candidates who scored well outlined Core management principles for LVOT obstruction (Decreasing LVOT Gradient and Optimising forward CO) and the interventions used to achieve these goals (increase preload, reduce contractility and HR, and increase afterload). Candidates who explained the rationale behind these interventions scored more marks.

Angoff score for this SAQ	6.59
Highest candidate score achieved	9.50
Angoff pass rate	84.3%

## Question 29

A pregnant patient requires prolonged mechanical ventilation in the ICU for a severe viral pneumonitis.

Outline the considerations required in the management of this patient for each stage of pregnancy:

- a) First trimester (2 marks)
- b) Second trimester (3 marks)
- c) Third trimester (5 marks)

**Syllabus topic/section:** 2.1.12 Obstetric Intensive Care L1

### Discussion:

This question was challenging because it demanded a thoughtful structure to cover its wide scope while avoiding unnecessary repetition. The answers were lacking in detail regarding each trimester - a requirement for scoring pass marks.

Candidates should use their reading time to plan how to address a question with such a broad scope. Many responses focused on only one aspect (e.g., maternal physiology), which made it difficult to achieve a passing mark. For wide-ranging questions, demonstrating a safe and structured approach is more important than providing a detailed deep dive into one area. Most candidates failed to mention multi-disciplinary team involvement or failed to mention their roles in the care of a pregnant ventilated patient. Furthermore, the candidates are advised to read the question carefully and answer what is being asked. Several candidates listed obstetric complications or outlined obstetric ALS steps; while these may be well-rehearsed, they attracted little to no marks and may have taken up valuable time.

Candidates who did well covered:

- Increasing maternofetal physiological demands relevant to various stages of pregnancy and incorporated the effects of mechanical ventilation on uteroplacental blood flow and effect of late pregnancy on ventilation.
- Trimester-specific foetal considerations during pregnancy (from initial teratogenicity to later viability, monitoring and optimisation).
- Strategies for peri-delivery care as trimesters progressed.

Angoff score for this SAQ	4.41
Highest candidate score achieved	7.00
Angoff pass rate	28.9%

### Question 30

Compare and contrast immunoglobulin therapy and plasma exchange for treatment of Guillain-Barré syndrome under the following headings:

- a) Advantages (2 marks)
- b) Disadvantages (2 marks)
- c) Potential complications (5 marks)
- d) Efficacy (1 mark)

### Syllabus topic/section: 2.1.8 Neurological Intensive Care L1

#### Discussion:

Candidates are reminded that the level of details in the answer should be proportional to the marks awarded. The question contained four distinct headings, each of which needed to be addressed separately.

The candidates were awarded less marks if their answers were generic and contained ambiguous statements. Examples of generic statements: For mechanisms of the therapies - "Removes antibodies", For advantages – "effective", "generally well tolerated", "well established treatment"- these did not attract any marks. Examples of ambiguous phrases were – "can be successful" or "may be effective". Ambiguous phrases portray lack of in-depth knowledge.

The candidates did well if they answered the question under designated headings, mentioned one or more distinct advantage and disadvantage of Plasma Exchange and Intravenous Immunoglobulin therapy. A higher mark was awarded to candidates that were able to write a range of complications covering multiple domains for both therapies. Candidates who could give a clear conclusion on comparative efficacy and included the treatment efficacy in subgroups of Guillain-Barre patients scored more marks.

Angoff score for this SAQ	4.86
Highest candidate score achieved	7.25
Angoff pass rate	36.1%

***The report continues on the next page.***

## SECOND PART ORAL EXAMINATION

### CLINICAL “HOT CASES” SECTION

#### EXAMINERS’ COMMENTS

The hot cases run for twenty minutes with an additional two minutes at the start of each case for the candidate to be given both a verbal and a written introduction to the case in question. This is to give candidates more opportunity to take in the relevant information and to plan a focussed approach to examination of the patient.

The following comments are a guide to the expected standard for performance in the hot cases:

- Candidates should demonstrate professional behaviour, treating the patient with consideration and respect.
- Candidates should address and answer the question asked of them in the introduction to the hot case.
- Candidates should interpret and synthesise information as opposed to just describing the clinical findings.
- Candidates need to seek information relevant to the clinical case in question.
- Candidates should be able to provide a sensible differential diagnosis and appropriate management plan. A definitive diagnosis is not always expected and, in some cases, may yet to be determined.
- Candidates should not rely on a template answer or key phrases but answer questions in the context of the clinical case in question.
- Candidates must be able to describe, with justification, their own practice for specific management issues.

Candidates who performed well in the hot cases, as in previous exams, were able to demonstrate the following:

- A professional approach showing respect and consideration for the patient.
- Competent, efficient, and structured examination technique and able to appropriately adapt the examination to suit the clinical case in question.
- Seeking of information relevant to the case.
- Appropriate interpretation and synthesis of their findings.
- Presentation of their conclusions in a concise and systematic fashion, addressing the issue in question.
- Listing of a differential diagnosis that is relevant to the clinical case in question.
- Appropriate interpretation of relevant investigations.
- Discussion of management issues in a mature fashion, displaying confident and competent decision-making.
- An appreciation of the complexities and key issues of the case.
- Overall performance at the expected level (transitional fellow).

Candidates who did not perform at the acceptable standard did so for reasons including the following:

- Missing or misinterpreting key clinical signs or confabulating signs on examination.
- Failure to perform a focussed examination relevant to the case in question.
- Incomplete or poor technique for examination of a system
- Causing pain, distress or potential harm to a patient due to rough technique or an inconsiderate examination.
- Poor synthesis of findings with limited differential diagnosis, sometimes compounded by missed key clinical signs on examination.

- Poor interpretation of imaging and data.
- Failure to demonstrate understanding of the key issues relevant to the case in question and a lack of insight into the problems.
- Inability to construct an appropriate management plan for the case in question.
- Hesitancy and/or uncertainty in stating a management plan.
- The need for significant prompting during the discussion with knowledge gaps.
- Limited time for discussion as a consequence of taking too long to present the clinical findings or to interpret basic data.
- Inability to convey the impression that they could safely take charge of the unit.

It is apparent that some candidates are very nervous, and this may adversely affect their exam performance. Candidates badly affected by nerves may benefit from sessions with a performance psychologist, drama coach, public speaking coach or similar.

Candidates are advised that they should not attempt the Second Part Examination until they can confidently examine patients, present the relevant clinical findings, synthesise all the information and discuss management issues at the appropriate level, **which is a trainee who is ready to enter the transition year of the CICM training program, by demonstrating they have the ability for safe, effective, independent practice as a transitional fellow.** Candidates who have not yet attained this level of experience are strongly encouraged to defer their attempt at the exam. Candidates should practise hot cases from the commencement of their exam preparation. To this end, candidates are encouraged to do the following in their daily clinical practice as preparation for the hot cases:

- Seek the opportunity to take charge of the unit and be responsible for management decisions.
- Practise examination of individual systems.
- Treat every case to be assessed at work as a hot case, i.e., pose a relevant question (e.g., 'Why is this patient not progressing?' 'What is the cause of the new fever?' 'Is this patient ready for extubation?'), perform a focussed exam and then present your findings to a colleague.

## SUMMARY OF CLINICAL "HOT CASES"

The clinical 'hot cases' require candidates to assess patients currently in the ICU, regarding answering specific questions around clinical assessment, including diagnosis, relevant investigations, and aspects of management. Five examples of clinical 'hot case' questions from this examination sitting are given below.

- *A 65-yr-old woman is Day 4 after a 5-day history of SOB and was admitted to the ICU with shock and respiratory failure. She has a background medical history of a Left mastectomy for breast cancer. She is intubated and ventilated. Please examine this patient to assess the cause of her respiratory failure.*
- *A 77-yr-old man is Day 2 following a cardiac arrest at scene following a bicycle vs car accident. C1/C2 spinal cord injury. He has no significant background medical history. He is currently intubated and ventilated with full spinal precautions. Please examine him with regards to his management priorities for the next 24 hours.*
- *A 42-yr-old woman is Day 4 after presenting with a left MCA stroke, she is 10 days post-partum. She has a background history of IVUDU. She is currently intubated and ventilated and off sedation for approximately 48 hours. Please examine the patient with the goal of determining the cause of her stroke.*
- *A 63-yr-old man is Day 12 ICU (readmission number three). He presented with hypoxia and respiratory distress. He has a significant background of a laryngectomy 2021 (supraglottic SCC) has a speaking*

*button (esophageal) insitu, motor neuron disease variant, hypothyroidism and was independent at home. He is awake alert and has a tracheostomy, with high flow oxygen. Please examine the patient to determine potential contributors to his current hypoxia.*

- *A 68-yr-old woman is day 22 ICU. She was admitted with respiratory failure with influenza and aspergillus on bronchial lavage. She has a significant background of smoking and COAD/ASTHMA. She has a tracheostomy and is on pressure support ventilation. What are the factors limiting her wean from mechanical ventilation?*

The clinical hot cases were examined at CICM accredited Intensive Care Units in Brisbane, QLD on Wednesday 23<sup>rd</sup> October 2025.

***The report continues on the next page.***

## **VIVAS**

The overall pass rate for the vivas was 78%, compared with 54% for the written paper and 58% for the hot cases. Failure to pass a viva was often due to knowledge gaps, poorly structured answers, and an inability to give the rationale for their responses. As in the discussion for the hot cases, candidates should not rely solely on generic statements, key-phrases, and template answers, and, instead, tailor their responses to the specifics of the question and be able to justify and expand their response.

Candidates are encouraged to practise viva technique and to discuss patient management, including the rationale for their decisions, with senior colleagues. As with the hot cases, candidates who are very nervous or have a poor technique may benefit from training with a performance coach.

**VIVA STEMS *over page***

## **DAY 1 – THURSDAY 23<sup>rd</sup> OCTOBER 2025**

### **Viva 1 – Procedure Station**

In this viva you will be asked to demonstrate the initial assessment and management of a 3-month-old infant (Sam), discovered unresponsive in a non-clinical area.

Personnel:

- You are initially a single rescuer.
- Assume that help has been requested and will arrive shortly.
- Please do not call out for additional help during the scenario.

Equipment:

- A low-fidelity mannequin represents the infant.
- All available equipment will be clearly visible.

**Question:**

**Please assess and manage the infant as you would in your usual clinical practice.**

**Syllabus topic/section:**

L2 Paediatric cardiopulmonary resuscitation

L1 Cardiopulmonary resuscitation

**Viva summary:**

Candidates were asked to demonstrate the initial assessment and management of a 3-month-old pediatric resuscitation. Candidates were asked to display competence in airway and circulation skills and articulate the differences between adult and paediatric resus with compression, ventilation, defibrillation and vascular access strategies.

**Candidates did well if they:**

- Demonstrated familiarity with and rapidly identified a cardiac arrest and started CPR within 30 seconds.
- Demonstrated effective CPR and airway skills and the differences in a paediatric patient.
- Knew the causes of VT arrest in an infant.
- High scores were achieved if the candidate took leadership, assigning roles, and had control of the situation with disposition planning, retrieval, and family update.
- Very good candidates had considered challenges beyond basic pediatric care.

**Candidates achieved less marks if they:**

- Failed to do appropriate chest compressions or ratios or displayed unfamiliarity with the ALS algorithm.
- Were disorganized and required lots of prompting suggesting unfamiliarity with resuscitation principles
- Did not identify specific causes of cardiac arrest.

Maximum Score	9.25
Percentage Passed	73%

## Viva 2

You are asked to review a 48-year-old patient on the haematology ward, for worsening hypoxia. The patient is day +15 post allogeneic haematopoietic stem cell transplant (allo-SCT) for acute myeloid leukaemia (AML).

The patient is febrile to 39.2 degrees, and tachypnoeic with SpO<sub>2</sub> of 92% on high-flow nasal prongs oxygen (flow 50 L/min, FiO<sub>2</sub> 0.6).

Examination reveals bilateral scattered crepitations and wheeze. The patient is haemodynamically stable.

Piperacillin-tazobactam was commenced 3 days ago.

The full blood count from this morning is as follows:

Parameter	Patient value	Normal adult range
Hb	82 g/L*	120-160
WCC	0.2 x 10 <sup>9</sup> /L*	4-11
Neutrophils	0.1 x 10 <sup>9</sup> /L*	1.9-7.5
Platelets	28 x 10 <sup>9</sup> /L*	150-350

**Outline the specific differential diagnoses you would consider for the fever and hypoxia.**

### Syllabus topic/section:

L1 Respiratory failure/pneumonia

L2 Sepsis and infections/ antimicrobial use

L1 Intensive care procedures/bronchoscopy

### Viva summary:

This viva explores knowledge and application of assessment and management principles of febrile neutropenia in a hematological patient. Differential diagnoses were asked for, principles of colonization vs infection of a BAL result positive for aspergillus, and prognostication in the context of the patient were asked for.

### Candidates did well if they:

- Were *Specific* in their answers. For example, not just stating “nosocomial organisms” but naming specifics.
- Prioritised specific differentials in order of likelihood and relevance.
- Were able to apply the stem to the ongoing management of the patient during the viva.

### Candidates achieved less marks if they:

- Were unable to display knowledge specific to aspergillus in presentation, diagnosis and treatment.

Maximum Score	8.75
Percentage Passed	67%

### Viva 3

A 32-year-old female patient presents to the Emergency Department with a 5-day history of diffuse headaches, visual disturbances, increasing confusion and intermittent chest pain.

The blood pressure is 220/130 mmHg.

**Outline your assessment for the potential differential diagnoses of this presentation.**

**Syllabus topic/section:**

L1 Neurological intensive care

L1 Cardiovascular Intensive Care, L1 Hypertensive Crisis, L2 conditions PRES

L1 Applied pharmacology

**Viva summary:**

This viva asked the candidate to outline assessment and management principles of a hypertensive crisis, including rationale of multimodal therapies, complications of the pathology and treatment modalities and transition strategies from ICU care to de-escalation to ward based therapy.

**Candidates did well if they:**

- Applied the glossary of terms and approached assessment in headings of Hx, Ix, Ex
- Gave answers that were specific to the patient discussed
- Prioritised differentials to the life threatening caused and did not forget to check pregnancy
- Understood the rationale for BP management and could justify the choice of agent

**Candidates achieved less marks if they:**

- Ignored a holistic approach the D/C planning
- Were unable to display a knowledge of HTN encephalopathy
- Unsafe management e.g., sedation for MRI in a confused patient with HTN emergency
- Did not consider a pregnancy related emergency

Maximum Score	8.75
Percentage Passed	61%

## Viva 4 - Radiology

### Syllabus topic/section:

L1 Radiological investigations (CT, CXR)

L1 Perioperative topics - cardiac surgery, abdominal surgery, L1 chronic hepatic failure, intraabdominal catastrophes, L1 traumatic brain injury, L1 respiratory failure, VV ECMO, L2 common paediatric conditions

### Viva Summary:

The radiology viva comprised 4 CXRS (including one paediatric CXR) and 2 CTs, 1. Brain trauma and 2. CT chest/abdominal/pelvis presenting with abdominal pain demonstrating perforated viscus, GIT ischaemia CLD changes and varices.

### Candidates did well if they:

- Had a systemic way of describing the CXR or CT including comments of the relevant differences for a film (e.g. “portal venous phase”, “non contrast”, “lung windows”
- Identified pathology and where able to give a logical explanation of the pathology (with the provided the clinical context in the stem) as they interpreted
- Were able to use correct terminology and not slang e.g. “white out”
- Candidates who were able to give clinical correlation and differentiate/correctly interpret the radiology e.g. between effusion and consolidation on a CXR

### Candidates achieved less marks if they:

- Were unable to localise correctly, particularly in the CT brain, e.g. SAH, intraparenchymal, Subdural or lobar classification, or provide evidence of raised ICP e.g., herniation, ventricular effacement
- Confabulated findings or were unable to describe findings
- Took a “scattergun approach”
- Were not familiar with anatomy or radiological findings (e.g. black on a CT denotes air)
- Used indiscriminate terms or inaccurate terminology
- Unable to correlate stem with abnormalities to look for

### Tips:

Answer the question asked. Practice interpreting radiology daily during ward rounds using correct terminology. Concentrate on the overall picture before diving into minutiae.

Maximum Score	8.00
Percentage Passed	45%

## **DAY 2 – FRIDAY 24<sup>th</sup> OCTOBER 2025**

### **Viva 5**

A 60-year-old patient sustained an isolated C3-C5 spinal column injury three days ago without any neurological impairment. They had a posterior fixation on the day of injury and an anterior fixation one day ago.

They are mechanically ventilated via an oral endotracheal tube on pressure support ventilation PS 10, PEEP 5 cmH<sub>2</sub>O, FiO<sub>2</sub> 0.3, with respiratory rate 12 breaths/minute and tidal volumes 600ml. Their current observations are pulse 90bpm and BP 115/70mmHg. They are awake and obeying commands.

**What factors would you consider when determining readiness for extubation in this patient?**

#### **Syllabus topic/section:**

L1 Respiratory intensive care- airway obstruction

L1 ICU procedures- intubation, front of neck access- Airway obstruction

#### **Viva summary:**

This viva required candidates to assess a D4 spinal trauma patient for extubation after spinal fixation for an Isolated C3-5 spinal column traumatic injury. Bedside tests for the assessment of extubation were discussed and management of postoperative stridor and failed extubation were explored. Candidates were asked to provide an opinion and justification of the technique of airway exchange catheter insertion prior to a second extubation attempt.

#### **Candidates did well if they:**

- Were able to demonstrate principles of post-operative and emergency airway management to the scenario provided
- Had a safe comprehensive initial and escalation plan for airway securement
- Were able to give a comprehensive account of qualitative and quantitative “cuff leak” test and applicability in this setting
- Knew the limitations of NIV in a patient with potential airway issues

#### **Candidates achieved less marks if they:**

- Many candidates were reluctant to address the specific challenges and concerns in determining readiness for extubation. Instead reciting a generic assessment that was largely irrelevant in the context given
- Did not identify the airway emergency
- Did not provide a safe intubation plan
- Did not demonstrate knowledge of the limitations of the cuff leak test

Maximum Score	8.25
Percentage Passed	67%

## Viva 6

A 60-year-old patient has been admitted to ICU with an acute decompensation of chronic liver disease. Past medical history includes alcohol-related cirrhosis (abstinent for 1 year) and recurrent ascites requiring monthly abdominocentesis.

They are admitted to ICU drowsy, jaundiced, oliguric and hypotensive.

Blood tests show mildly worsened renal function, thrombocytopenia and INR elevation compared to baseline.

**Outline your management of this patient's acute decompensation of their chronic liver disease.**

### Syllabus topic/section:

L1 Gastrointestinal Intensive Care - acute hepatic failure, Chronic hepatic failure

### Viva summary:

This viva required the candidate to demonstrate knowledge of acute and chronic liver disease and the comparisons between them in terms of complications and management priorities. TIPS contraindications and complications were explored.

### Candidates did well if they:

- Identified and managed common precipitants of CLD decompensation
- Demonstrated familiarity of ALF and provided a nuanced approach to management
- Showed clinical experience and insights relevant to answers e.g. how they use serum ammonia level in *their* practice, recognizing the need to control early

### Candidates achieved less marks if they:

- Wasted time with irrelevant details (e.g. detailed the *assessment* when specifically asked for *management*)
- Did not demonstrate familiarity with the management of ALF
- Gave generic management responses (ESPECIALLY ABCD) without taking specific aspects of patient discussed.

Maximum Score	8.25
Percentage Passed	80%

## Viva 7

A 65-year-old man presents to Emergency with melaena, confusion and new left arm weakness.

Blood pressure is 90/55 mmHg with a heart rate of 130 bpm.

He has a past history of atrial fibrillation and reports taking a blood thinner.

He cannot remember the name or the dose of the blood thinner.

**Outline your initial assessment of this patient.**

### **Syllabus topic/section:**

L1 Applied pharmacology in ICU, Haematology- anticoagulants

L1 Cardiovascular intensive care- cardiac arrhythmias

### **Viva Summary:**

Complications of Anticoagulant therapy, neurosurgical complications, DOAC reversal, decision making on future DVT prophylaxis

### **Candidates did well if they:**

- Provided a thorough assessment of neurological symptoms and bleeding and prioritized case specific investigations with rationalization
- Considered reversal strategies of anticoagulant with neurosurgical bleeding
- Volunteered management strategies and gave specific endpoints for their management strategies including MDT involvement (e.g., Gastro for scopes)
- Demonstrated familiarity of timing considerations of VTE prophylaxis with anticoagulation.

### **Candidates achieved less marks if they:**

- Did not reverse anticoagulant effects
- Gave a generic list of investigations or ABCD assessment structures
- Deferred to other medical surgical teams for decision making **without** expressing their own opinion and clinical judgement
- Did not demonstrate risk benefit analysis for patient benefit or objective assessment
- Had an incomplete understanding of BP management priorities in the context of bleeding vs ICH

Maximum Score	9.50
Percentage Passed	53%

## Viva 8 – Communication Station

It is your first week as a transition year (TY) trainee in a new hospital.

You are looking after Chris, a 19-year-old male who has been in the ICU for 6 months with Guillain-Barre syndrome (GBS).

Chris' tracheostomy was removed 2 days ago, he has been commenced on a modified diet with supplemental enteric feeds and is no longer on any intravenous medications.

Chris remains globally weak, fatigues easily after any physical exertion including eating, and requires 2x assist for transfers.

The team has been planning Chris' transition to the ward. A ward bed should become available in the next day or so. Chris is very excited about this transition, however he has asked you to speak to his parent Sam who has been expressing some concerns regarding ward discharge.

### Syllabus topic/section:

L1 Communication and collaboration in Intensive Care- Family and Whanau meetings

### Viva Summary:

The complexities surrounding discharge to the neurology ward of a long stay ICU patient with parental concerns relating to the proposed transition of care.

### Candidates did well if they:

- Actively listened to and acknowledged concerns raised, provided strategies or solutions to address specific concerns. (e.g. meetings, visits, handover, MDT involvement)
- Took cues when given and explored themes to demonstrate active listening
- Talked in a well-paced manner – this viva is not a race to the finish line
- Did not jump into explanations quickly and displayed familiarity with a discharge process of a long-term ICU patient
- Were honest about the change in environment on the ward, not overly positive or negative

### Candidates achieved less marks if they:

- Ignored concerns or cues raised
- Were dismissive or condescending, talked over the actor
- Rushed the conversation with a goal in mind overriding the family concerns
- Seemingly acknowledged family concerns but could not adequately address them or try to provide strategies, plans or solutions for reassurance thus demonstrating a lack of experience with the issues surrounding the long-term ICU patient at discharge.
- Unrealistic as to assurances e.g. visiting hours, nursing care, outcomes

Maximum Score	9.25
Percentage Passed	67%

### Viva 8 Marking Template

	Below standard	At Standard	Above standard
<b>General listening, questioning, non-verbal aspects</b>  For actors “do you feel listened to and/or reassured?”	Fake or forced discussion:  Very poor questioning or comments out of context  Failure to follow up cues (not listening)	Demonstrates active listening; may miss some cues or fails to completely clarify concerns.  Appropriate and comfortable non-verbal communicate (i.e.. tone,	Good use of open-ended questions  Acknowledgment of concerns/emotions  Active listening inc. following up on most cues

<b>(2 marks)</b>	Judgmental or aggressive Alienating or disengaging non-verbal communication. Rushing the conversation	eye contact, body language)	Good use of signposting (verbal headings & setting direction)  Seeks to understand priorities  Excellent non-verbal cues including silence
	<b>0-0.5 marks</b>	<b>1 mark</b>	<b>1.5-2 marks</b>
<b>Rapport and empathy</b>  <b>(2 marks)</b>	Dismissive or diminishing of concerns  Inappropriately overly familiar or distant	Comfortable, natural and balanced/professional discussion regarding ward discharge.  Appropriate language (avoid medical jargon)	<b>Standard PLUS</b>  Brings Chris into discussion and what's best for patient progress  Establish rapport to ask/explore Sam's fear, challenges (work) & guilt.  Recognise candidate is new face to team
	<b>0-0.5 marks</b>	<b>1 mark</b>	<b>1.5-2 marks</b>
<b>Content of discussion</b>  <b>(4 marks)</b>	Enforcing discharge regardless or agreeing not to discharge.  Defensive behaviours e.g.  Criticising colleagues  Unrealistic guarantees  Inadequate responses e.g. giving into demands, avoidance, confrontational/aggression	Adequately acknowledge and address the concerns raised professionally  Explains discharge in a balanced manner e.g. staffing, familiarity, SMO contact, deterioration/readmission or other concerns raised	Excellent considerations, explanation/strategies of the concerns raised e.g. suggest ward visit  Follows up on subtle cues, explores reasons concerns are raised  Offers follow-up meeting if appropriate  Checks in with actor's understanding
	<b>0-1.5 marks</b>	<b>2-3 mark</b>	<b>3.5-4 marks</b>
<b>Overall gestalt professionalism</b>  <b>(2 marks)</b>	Professional concerns  <b>OR</b>  Operating at junior (non TY) level	Senior registrar/transition year level.  Would trust with routine family meetings	Consultant level skills demonstrated
	<b>0-0.5 marks</b>	<b>1 mark</b>	<b>1.5-2 marks</b>

Significant concerns Yes/No