

FJFICMI Fellowship Examination 2019

Short Answer Question Paper

Section A

1. Compare and contrast in tabular format the clinical presentation, typical CSF findings and management of *Streptococcus pneumoniae* meningitis, *Listeria monocytogenes* meningitis and *Herpes simplex* encephalitis.
2. Define fluid responsiveness. List 6 commonly used methods of haemodynamic assessment of fluid responsiveness and with each method mention at least 2 of their limitations.
3. List the potential causes of anaemia in the critically ill patient. Discuss the indications for transfusion referencing relevant literature. List the complications of red cell transfusion.
4. Write short notes on the following
 - i. Renal clearance (definition and assessment)
 - ii. A comparison of time dependent versus concentration dependent antimicrobials

Section B

5. List the options for anticoagulation in patients on continuous renal replacement therapy. Discuss the main advantages and disadvantages of each option.
6. Define status epilepticus and list the systemic complications that may arise from uncontrolled seizures.
7. For each of the two clinical scenarios below please describe the clinical challenges likely to be encountered when weaning from mechanical ventilation.
 - i. A previously healthy 29-year old female who has had recent surgical fixation of a C5 level cervical spine fracture with complete neurology (ASIA A).
 - ii. A 72-year old with advanced heart failure (ejection fraction 10%) recovering from an episode of acute pulmonary oedema.
8. Write a short note to **describe** and **evaluate** the role of each of the following in the management of traumatic brain injury.
 - i. Intracranial pressure monitoring
 - ii. Decompressive craniectomy
 - iii. Hyperosmolar therapy

JFICMI Fellowship Examination Short Answer Paper 2018

Answers to Section A and B should be written in separate answer books

Time allowed 90 minutes

Section A

- 1) List the microbiological causes of infective endocarditis and reference the source of each cause. List the indications for surgery in infective endocarditis and mention controversies regarding surgical management.
- 2) List both the pulmonary and non-pulmonary manifestations of viral influenza and describe how you would manage these manifestations.
- 3) List what patient groups require isolation in the critical care environment and why. In your answer describe what precautions, if any, need to be taken by health care staff caring for these patient groups.
- 4) Write short notes on the causes, diagnosis and treatment of shock seen in the first 24 hours following open surgical repair of a ruptured abdominal aortic aneurysm.

Section B

- 5) Classify the causes and list the physiological consequences of a patient admitted to the ICU with a core body temperature of 29 degrees centigrade. Describe how you would manage this patient.
- 6) Compare and contrast the management in the following clinical scenarios: stroke caused by intracranial haemorrhage (excluding aneurysmal subarachnoid haemorrhage) versus stroke caused by middle cerebral artery thrombosis. In your answer include blood pressure targets.
- 7) What is HELLP syndrome? Outline how you would confirm the diagnosis and list your differential diagnosis. List the main complications that may arise, and outline the core principles of treatment.
- 8) Treatment failure in VAP is associated with increased mortality; Discuss strategies to overcome this in the critically ill – focusing on antimicrobial therapies and the reason(s) for your strategies.

END OF THIS PAPER

JFICMI Fellowship Examination Short Answer Paper 2017

Answers to Section A and B should be written in separate answer books

Time allowed 90 minutes

Section A

1. What are the clinical signs of and risk factors for a life threatening severe asthma attack? Other than clinical examination, what tests help you to assess the severity of an asthma attack at the bedside and why? List the basic medical treatments you would use and other “non-standard” treatments and adjunctive therapies (excluding invasive mechanical ventilation) you would consider.
2. Write short notes on cardiogenic pulmonary oedema paying attention to pathophysiology, causes, diagnosis and treatment.
3. List complications associated with and describe the basic principles of the management of enterocutaneous fistulae.
4. Outline the causes and management of acute hyponatraemia

Section B

5. Compare and contrast in tabular format the mechanism(s) of action, clinical use(s) and side effect(s) of the following: levosimendan, milrinone and dobutamine.
6. Describe how you would establish the diagnosis of brain stem death. Mention in your answer situations where the clinical testing alone is precluded.
7. Write down a checklist of points that need to be considered when assessing the methodological quality of an interventional prospective randomized control trial in the critically ill.
8. Outline the specifics of the management of acute variceal haemorrhage in liver cirrhosis paying attention to the following 4 headings: initial management and resuscitation, timing of endoscopy, control of bleeding and failure to control active bleeding.

END OF THIS PAPER

Fellowship Examination Short Answer Paper 2016

Answers to Section A and B should be written in separate answer books

Time allowed 90 minutes

SECTION A

1. Define severe acute pancreatitis including in your answer reference to scoring systems. List the complications of severe acute pancreatitis and write short notes on best practice with regard to antimicrobial use and nutrition.

2. Draw the 3 basic ventilator curves for mandatory volume cycled ventilation in the following 2 scenarios: a patient with severe bronchial asthma and a patient with severe ARDS. Identify in your diagrams the following points/areas:

- a. Inspiratory time
- b. Expiratory time
- c. Peak pressure
- d. Plateau pressure
- e. PEEP / PEEPi
- f. Respiratory Cycle time

Interpret the inspiratory pause pressure / manoeuvre during volume cycled ventilation and the significance of the pressure it generates. In addition explain the phenomenon and correction of autotriggering?

3. Discuss the principles of antimicrobial dosing in the critically ill.

4. Describe your haemostatic approach to the management of a patient with intracranial and scalp wound bleeding after head trauma who has been taking a novel oral anticoagulant (NOAC).

SECTION B

- 5.** Construct a table which compares and contrasts diabetes insipidus, the syndrome of inappropriate antidiuretic hormone secretion (SIADH) and cerebral salt wasting syndrome under the following headings: aetiology, clinical presentation, biochemical abnormalities, complications and therapeutic management.

- 6.** Along with a brief explanation of extracorporeal life support (ELS), discuss the indications and contraindications of ELS (also known as extracorporeal membrane oxygenation-ECMO) for both cardiac and respiratory failure.

- 7.** Outline the clinical assessment of and a diagnostic and therapeutic approach to a patient with urosepsis.

- 8.** Discuss the clinical assessment, investigations and therapeutic options for a patient with critical illness neuromyopathy.

END OF THIS PAPER



**Joint Faculty of
Intensive Care Medicine of Ireland**

College of Anaesthetists of Ireland • Intensive Care Society of Ireland
Royal College of Physicians of Ireland • Royal College of Surgeons in Ireland

Fellowship Examination Short Answer Paper 2015

Answers to Section A and B should be written in separate answer books

Time allowed 90 minutes

Section A

1. Outline in bullet format the initial assessment and the early complications (first 2 weeks post injury) of a patient with 60% burn injury including a smoke inhalation injury.

2. Define acute liver failure. List 5 common causes of acute liver failure. Outline your management of a patient who presents post paracetamol overdose.

3. Write short notes on the following:
 - a. The basic features of the ABO and Rhesus blood groups
 - b. The basic principles of transfusing uncrossmatched blood
 - c. The basic pathophysiology, symptoms and initial management of an acute haemolytic transfusion reaction

4. Outline the pathophysiology, clinical presentation and critical care management of tetanus.

Section B

5. a) List the pathophysiological and clinical consequences of hypercapnoea.
b) Describe your management of a patient with ARDS who develops hypercapnoea.

6. Discuss the clinical presentation of myocarditis to include:
 - when it should be suspected
 - investigations and diagnosis
 - treatment
 - prognosis

7. Using a table, compare and contrast the causes and management of intracranial
 - i. Acute subdural haemorrhage
 - ii. Acute extradural haemorrhage

8. With respect to continuous renal replacement therapy (CRRT) in the critically ill:
 - a) Draw a labeled diagram to represent the circuit for continuous veno-venous haemodiafiltration (CVVHDF).
 - b) Define the following terms and briefly explain their relevance in CRRT:
 - i. Dialysis dose
 - ii. Transmembrane pressure
 - iii. Sieving coefficient
 - iv. Filtration fraction

Fellowship Examination Short Answer Paper 2014

Answers to Section A and B should be written in separate answer books

Time allowed 90 minutes

Section A

1. Discuss your approach to the diagnosis and initial therapy of a previously well 55 year old patient presenting this winter with presumed community acquired pneumonia.
2. Outline the presentation, diagnosis and grading of diastolic heart dysfunction.
3. Compare and contrast myasthenia gravis, Guillain Barré Syndrome and critical illness polymyoneuropathy with regard to diagnosis and management.
4. Outline the role of thromboprophylaxis, treatment and outcome in the ICU patient who develops atrial fibrillation.

Section B

5. Outline the causes and management of acute hyponatraemia.
6. Discuss the aetiology and diagnosis of bowel ischaemia in the critically ill.
7. Critically evaluate the role of ultrasound in the assessment of patients following blunt multitrauma.
8. Compare and contrast acute and chronic lithium toxicity

Fellowship Examination Short Answer Paper 2013

Answers to Section A and B should be written in separate answer books

Time allowed 90 minutes

Section A

1. Outline the initial assessment, and the early complications (first 2 weeks post injury) of a C6 complete traumatic spinal cord injury.
2. Write short notes on:
 - a) Cyanide toxicity
 - b) Vasopressin - patient selection, therapeutic indications and complications.
3. Define pulmonary hypertension and describe your initial assessment and management of a patient with known pulmonary hypertension who presents with an acute lower respiratory tract infection now requiring intubation, mechanical ventilation and cardiovascular optimisation. (where an investigation is requested, please define rationale).
4. Outline causes and management of persistent filter clotting on CRRT circuit.

Section B

5. Discuss the therapeutic options for the management of a septic patient with an intra-abdominal collection post small bowel resection for adhesions with primary anastomosis. Include in your answer your approach to antimicrobial therapy and to feeding this patient.
6. Discuss the approach and current evidence for
 - a) Protective lung ventilation
 - b) HFOV
 - c) Prone Positioning
 - d) Inhaled pulmonary vasodilators
7. Outline the principles of management of diabetic ketoacidosis.
(adult patient presents generally unwell, awake, thirsty, BP 80/60 HR 110/min, blood glucose 42 mmol/L, serum sodium 132 mmol/L and pH 6.99).
8. Outline the ethical arguments pertaining to research in incompetent adults (eg. critically ill patients).

END OF THIS PAPER

THE JOINT FACULTY OF INTENSIVE CARE
MEDICINE OF IRELAND

Diploma of the Irish Board of Intensive Care Medicine
Short Answer Paper 2012
Time allowed 90 mins

Section A

1. Write brief notes on the presentation, diagnosis, microbiology and treatment of necrotizing soft tissue infections (NSTIs).
2. Define the osmolar gap and list the causes of a raised osmolar gap. Using an example of your choice, describe the management of a raised osmolar gap.
3. Write short notes on the indications, proposed mechanisms of action, and the complications of intra-aortic balloon pump counterpulsation.
4. How would you differentiate acute RV myocardial infarct from acute PE in a ventilated ICU patient? If a PE is diagnosed, outline your approach to management including the indication for thrombolysis.

Section B

5. Describe clinical assessment and monitoring of patients being weaned from ventilation.
6. Discuss the current management of acute stroke and its critical care implications.
7. Write short notes on the definition, advantages and disadvantages of clinical information systems
8. Write short notes on early enteral nutrition and prophylactic antibiotic therapy in the management of severe acute pancreatitis.

THE JOINT FACULTY OF INTENSIVE CARE
MEDICINE OF IRELAND

Diploma of the Irish Board of Intensive Care Medicine
Short Answer Paper 2011
Time allowed 90 mins

Section A

Write short notes on

1. The elements of the first 6hour surviving sepsis campaign care bundle and discuss their relative merits.
2. The assessment and relevance of fluid responsiveness in the critically ill. Outline the end-points of fluid resuscitation.
3. Your approach to high frequency oscillation ventilation (HFOV). Outline the indications, patient selection / exclusion, assessment of efficacy and complications.
4. The early recognition of acute kidney injury (AKI). Include the role of biomarkers.

Section B

Write short notes on

5. Causes, diagnosis and management of delirium in Critical Care
6. The management of severe variceal bleeding in a cirrhotic patient including the role of trans internal jugular porto-systemic shunting (TIPS)
7. Categories of antifungal agents used in the management of the critically ill and summarise their relative merits.
8. The diagnosis of catheter related infection (CRI) and the relevance of CRI to quality improvement (QI) in a critical care service.

Diploma of the Irish Board of Intensive Care Medicine
Short Answer Paper 2010
Time allowed 90 mins

Section A Write short notes on

1. Diagnosis, management, and complications of carbon monoxide poisoning
2. H1N1 infection; include in your answer detail of the associated acute lung injury / adult respiratory distress syndrome pattern
3. In the light of current evidence, how would you write and implement a glycaemic control protocol in your ICU.
4. The haemodynamic support of the organ donor patient in ICU. Include in your answer (the current recommendations on) the role of vasopressin and 'hormone cocktail' therapy.

Section B Write short notes on

5. Intensity of continuous renal replacement therapy – include in your answer reference to dialysis prescription and efficacy.
6. Diastolic heart dysfunction in the Critical Care patient.
7. Prevalence and importance of antimicrobial prescribing in Critical Care. Include in your answer the key components of an antimicrobial stewardship programme.
8. Heparin induced thrombocytopenia

Irish Board of Intensive Care Medicine

DIBICM Examination 2009

Section A

Write short notes on

1. Discuss the diagnosis and management of acute coronary syndrome occurring in the peri-operative patient.
2. Discuss the role of scoring and outcome prediction tools in MODS.
3. Discuss the potential pitfalls in the clinical diagnosis of brain stem death.
4. The rate of CRBSI in your unit is 25/1000 catheter days. What evidence- based interventions should be introduced?

Section B

Write short notes on

5. Define the different classes of anti-fungal agents discuss the reasons for prescribing the different agents, including reference to appropriate dosing strategy
 6. Discuss the clinical presentation and approach to management of a high output upper GI fistula
 7. What are the benefits of daily interruption of sedation in the mechanically ventilated patient.
 8. Discuss the diagnosis and management of acute on chronic liver failure.
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