



Cert Critical Care(SA) Anaes

THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain
Reg No 1955/000003/08

Examination for the Subspecialty Certificate in Critical Care of the
College of Anaesthetists of South Africa



Paper 1

1 March 2018

(3 hours)

All questions to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 A 58-year-old male patient with liver cirrhosis and a history of dyspraxia and confusion every 3-months, presents with coffee ground vomitus and is grossly disorientated
 - a) How would you classify his hepatic encephalopathy? (5)
 - b) What differential diagnoses should be excluded before treating for hepatic encephalopathy? (10)
 - c) Discuss your management of hepatic encephalopathy in this patient. (35)[50]

- 2 Discuss the role the following cells play in the immune response to sepsis. In your answer also include how the specific cells are activated, their role in cytokine production and their overall function in the septic environment
 - a) Neutrophil function. (10)
 - b) Monocyte and macrophage function. (10)
 - c) T cell function. (10)
 - d) Dendritic cell function. (10)
 - e) Discuss potential therapies, either available or under development, that address the immune response in sepsis. (10)[50]

- 3 Discuss necrotising soft tissue infections under the following headings
 - a) The clinical and laboratory characteristics, which are both suggestive and typical of a necrotising soft tissue infection. (10)
 - b) Applying the latest surviving sepsis guidelines, discuss a comprehensive antimicrobial strategy for the treatment of necrotising fasciitis. (25)
 - c) What are the factors affecting the pharmacokinetics of antibiotics in critically ill patients on renal replacement therapy (RRT)? Indicate how you would optimise dosing. (15)[50]

- 4
 - a) It is recommended that for patients with ARDS a “right-ventricular protection ventilation strategy” be implemented
 - i) Discuss the justification for this recommendation. (10)
 - ii) Discuss the various strategies that may be implemented to protect the right ventricle in the patient with ARDS. (10)

- b) Airway humidification is a real concern in intubated or tracheostomised patients
- i) What are the effects of sub-optimal humidification? (5)
 - ii) Discuss your approach to airway humidification. The answer should include the following
 - Classification.
 - Mode of action.
 - Advantages.
 - Disadvantages. (15)
- c) APRV (airway pressure release ventilation) is regarded by some intensivists as an attractive mode of ventilation in patients with ARDS. Address APRV as follows
- i) With the use of a labeled diagram explain how APRV works and how it differs from conventional biphasic positive airway pressure ventilation. (6)
 - ii) Discuss the advantages and disadvantages of APRV and indicate what the impact on the patient outcome is. (4)
- [50]