

THE HONG KONG COLLEGE OF ANAESTHESIOLOGISTS
FINAL FELLOWSHIP EXAMINATION (INTENSIVE CARE)
SHORT ANSWER PAPER

15 Questions

Monday 6 August 2018 (9:00 am - 11:30 am)

NOTICE

- (A) Write your answers in the books provided.
- (B) Please separate your answers into three groups:
 - Q1 to Q5
 - Q6 to Q10 and
 - Q11 to Q15
- (C) Start each answer on a new page and indicate the question number.
- (D) You may choose to answer the questions in any order but please make sure that they can be separated into the three groups as above, by starting on a new booklet as necessary.
- (E) It is not necessary to rewrite the question in your answer book.
- (F) You should answer each question in ten minutes or less.
- (G) The questions are worth equal marks.
- (H) Record your number on the cover of each book and hand in all books.
- (I) Use ink or ball-point pen

Question 1

Aconite is often used in Traditional Chinese Medicine. Briefly outline the clinical manifestations of aconite poisoning (6 marks) and specific treatments (2 marks).

List four (4) reasons why acute poisoning may occur. (2 marks)

Question 2

You are called to see a middle age burn victim, rescued from his home after a gas explosion. He had extensive 2nd to 3rd degree burns over face, chest, abdomen, bilateral upper limbs and lower limbs. On arrival, his Glasgow Coma Scale (GCS) was E1V1M1 and noted to be hypotensive.

- i) List six possible causes of coma in this patient. (3 marks)
- ii) Explain how you would manage the hypotension. (6 marks).
- iii) Name two (2) methods to assess the extent of burn. (1 mark)

Question 3

Describe the diagnosis (1 mark), risk factors (3 marks) and principle of management of post partum hemorrhage (PPH) (6 marks) in the intensive care setting.

Question 4

Discuss the role of video laryngoscopy (VL) in the critically ill. (10 marks)

Question 5

On a rainy day in winter, a 75 year-old lady was brought to the accident and emergency department (AED) colleague after being found lying on the street with a core body temperature of 28C. On arrival to the AED, her initial Glasgow Coma Scale (GCS) was E3V2M5. She was transferred to the CT-suite for a full trauma series. The initial report of the trauma series was unremarkable. You are

called to assist when she developed a witnessed ventricular fibrillation (VF) during transfer back from the CT-suite to the AED.

- i) What is the most likely diagnosis? (1 mark)
- ii) List four (4) features you would look for in this patient's ECG. (2marks)
- iii) Discuss your initial resuscitation plan of her VF cardiac arrest (post-cardiac arrest management care is not required). (7 marks)

Question 6

Critically appraise the use of non-invasive ventilation (NIV) in Adult ICU. (10 marks)

Question 7

The following oral anticoagulants are currently in use for atrial fibrillation:

1. Warfarin
2. Dabigatran
3. Rivaroxaban

List:

- i) Their mechanisms of actions (1.5 marks)
- ii) Their advantages and disadvantages (3 marks)
- iii) The appropriate laboratory tests to assess their anticoagulation effect (2.5 marks)
- iv) The ways to reverse their anticoagulation effects when life-threatening bleeding occurs (3 marks)

Question 8

Immediately after you extubated a 60-year-old lady who was admitted for pneumonia 10 days ago, she developed noisy breathing. You suspect that she has post extubation stridor.

- i) List six (6) risk factors for post extubation stridor. (3 marks)
- ii) Describe your management and ways of prevention of post extubation stridor. (3 marks)
- iii) Describe how you would perform a cuff leak test. (4 marks)

Question 9

List the complications specific to temporary transvenous cardiac pacing in intensive care unit. (5 marks)
Discuss the measures that are important in minimizing complications. (5 marks)

Question 10

Compare Continuous Venovenous Haemofiltration (CVVHF), Sustained Low Efficiency Dialysis (SLED) and Intermittent Hemodialysis (IHD) with respect to:

- i) Mechanism of solute clearance (3 marks)
- ii) Advantages (4 marks)
- iii) Disadvantages (3 marks)

Question 11

Outline the management of hepatic encephalopathy in a patient with known hepatitis B cirrhosis. (10 marks)

Question 12

A 40-year-old woman presented to the Emergency department for massive haemoptysis. She is on warfarin.

- i) List six (6) causes of her massive haemoptysis. (3 marks)
- ii) Discuss four (4) methods that reduce soiling of the non-bleeding lung and give one (1) side effect for each method. (4 marks)
- iii) List the treatment options that may stop the bleeding. (3 marks)

Question 13

You are the Intensive Care Unit representative of the hospital technology evaluation and equipment committee. You would like to introduce the Extracorporeal Carbon dioxide Removal (ECCO2R) device after learning the potential applications in the critically ill. Please discuss the principles you would consider? (10 marks)

Question 14

Regarding brain death certification :

- i) list the brain stem reflexes you would perform
- ii) list the cranial nerves involved afferent and efferent pathways involved
- iii) how you would perform each and the response you would look for

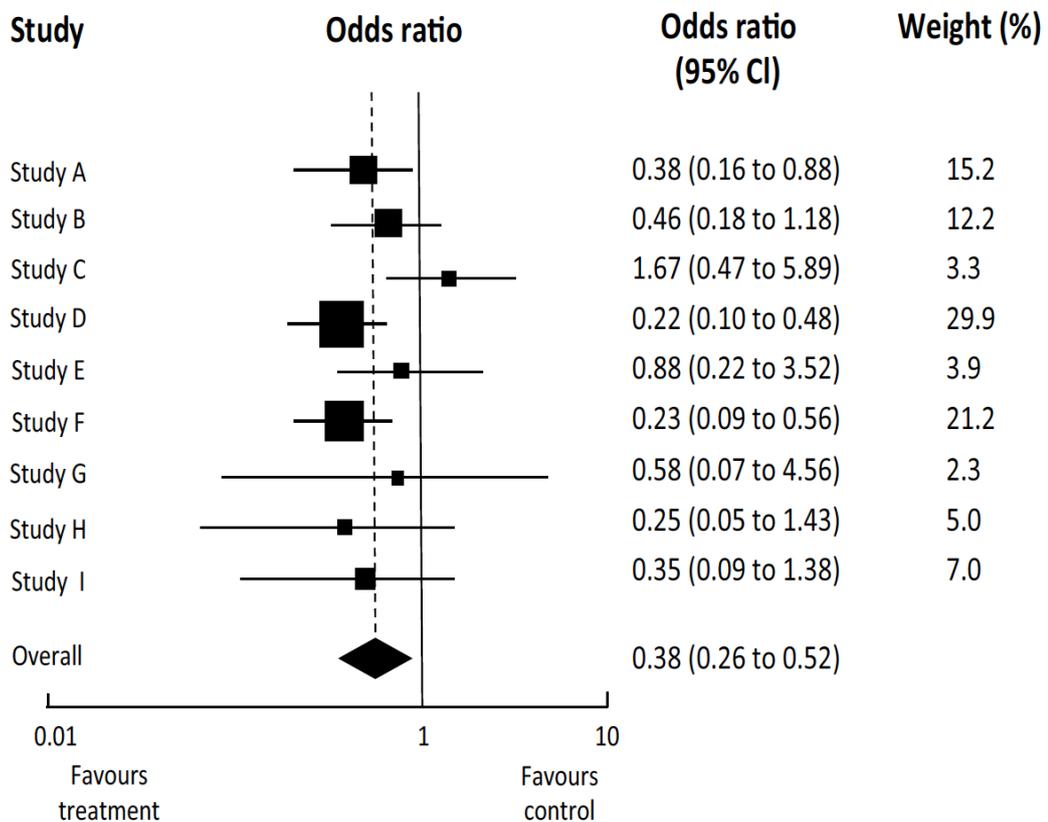
You may tabulate your answers. (9 marks)

- iv) List five incidental observations that are compatible with brain death. (1mark)

Question 15

The following is a hypothetical forest plot for the effect of a new treatment (substance X) on the mortality of patients with severe acute respiratory distress syndrome (ARDS) from a recent meta-analysis.

- i) Describe information contained in the forest plot (4 marks)
- ii) Describe the assessment tools to evaluate the heterogeneity of meta-analysis (2 marks)
- iii) Provide your interpretation of the results (2 marks) and explanations of your reasoning? (2 marks)



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