

# Part 2 Fellowship Examination in Critical Care Medicine 2019

## PAPER 2

College of Critical Care Medicine

(under auspices of Critical Care Education Foundation)

1. Answer only information that is **relevant to the question and to write legibly**.
  - a. **Questions in Section A Short Notes. Each question carries 5 marks only.** You should not take more than 5 minutes per question in these sections. Normally one side of a fool-scape paper is enough as long paragraphs are not expected.
  - b. **Questions in Section B are Long Notes. Each question carries 10 marks only.** You should not take more than 10 minutes per question in these sections. Normally 2 side of a fool-scape paper provided is enough as long paragraphs are not expected. **Choose ANY 4 out of 5 Choices in this section.**
  - c. **Section C: Question carries 10 Marks.** Normally 2 side of a fool-scape paper provided is enough
2. **START ALL QUESTIONS ON A NEW PAGE**
3. **Record your candidate ROLL number on top.**

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### SECTION A (5 marks each)

Q. 1.	A young man with insulin dependent Diabetes Mellites (IDDM) is admitted for hypotension (80/40 mmHg) and hypoglycemia (46 mg/dL) with drowsiness. <u>List 4 likely causes</u> of hypoglycemia in this patient?
Q. 2.	<u>List 2 causes for each of the following:</u> <ol style="list-style-type: none"><li>a) Metabolic alkalosis with normal/low Urinary chlorides?</li><li>b) Metabolic alkalosis with high Urinary chlorides without hypertension?</li><li>c) Metabolic alkalosis with high Urinary chlorides with hypertension?</li></ol>
Q. 3.	<u>Critically evaluate</u> the use of hypertonic saline and mannitol in the management of severe closed head injury.
Q. 4.	<u>List 5 likely causes</u> of sudden respiratory distress in a woman in labor, who has no previous history of cardiac or respiratory disease?
Q. 5.	<ol style="list-style-type: none"><li>a) <u>List</u> the various nosocomial infections in the ICU?</li><li>b) <u>List</u> preventative measures for each?</li></ol>
Q. 6.	With respect to pathological conditions of the spinal cord, <u>list the clinical findings</u> for each of the following syndromes: <ol style="list-style-type: none"><li>a) Complete spinal cord transection</li><li>b) Spinal cord hemi-section</li><li>c) Central spinal cord syndrome</li><li>d) Anterior spinal cord syndrome (anterior spinal artery syndrome)</li><li>e) Cauda equina syndrome</li></ol>
Q. 7.	A 58 year man is transferred to your ICU after undergoing a Orthotropic liver transplant: <u>List</u> the various complications that may occur in this early post-op period (including technical, immunological etc) ?
Q. 8.	<u>Outline</u> the pathophysiology, complications and treatment of Hyper-Osmolar Non-Ketotic (HONK) coma?
Q. 9.	<u>List</u> the various <b>clinical scenarios</b> in which you would consider dialysis in the ICU patient?
Q.10.	<u>List</u> the sources of error in arterial blood gas (ABG) collection and handling?

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### SECTION B (10 marks each. (Answer any 4 of the 5 Questions))

Q.11.	<p><u>Outline</u> the important distinguishing clinical features and the site of lesion for the following neurological states.</p> <ul style="list-style-type: none"><li>a) Locked in syndrome.</li><li>b) Persistent vegetative state</li><li>c) Akinetic mutism</li><li>d) Brain death</li></ul>
Q.12.	<p>A previously healthy 40 year man was admitted to your ICU with an isolated severe head injury. Next day he develops polyuria.</p> <ul style="list-style-type: none"><li>a) <u>List</u> the possible causes for his polyuria.</li><li>b) <u>Outline</u> your approach to establishing the cause for polyuria</li></ul>
Q.13.	<p>A 58 year man admitted to the ICU, is detected to have a serum Calcium of 13.2 mg/dL.</p> <ul style="list-style-type: none"><li>a) <u>List</u> the ‘early’ and ‘late’ manifestations of hypercalcemia (atleast 3 each).</li><li>b) <u>Outline</u> the treatment options available in a patient with hypercalemia?</li></ul>
Q.14.	<p>Please <u>discuss in brief</u> the study design and major conclusions for <b><u>ANY 2 of the following classic studies?</u></b></p> <ul style="list-style-type: none"><li>a) Intensive versus Conventional Glucose Control in Critically Ill Patients. (NICE-SUGAR Study Investigators. N Engl J Med 2009)</li><li>b) Hydroxyethyl Starch or Saline for Fluid Resuscitation in Intensive Care (CHEST study). Myburgh, NEJM 2012</li><li>c) Early versus Late Parenteral Nutrition in Critically Ill Adults. (Caesar, NEJM 2011;365:506-517</li></ul>
Q.15.	<ul style="list-style-type: none"><li>a) <u>Define</u> ‘fluid responsiveness’?</li><li>b) <u>Discuss</u> various methods (static and dynamic) to assess “Fluid responsiveness” in an ICU patient?</li></ul>

### SECTION C (10 marks)

Q.16.	<p><u>Discuss</u> the initiation, monitoring and complications of Total Parenteral Nutrition (TPN) using a 3-in-1 bag, in an emaciated, 40 kg, adult patient with advanced Ca-esophagus?</p>
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**Recheck: (1) You have to put your Roll number on each answer sheet.  
(2) Answer Numbers are correctly written in appropriate section.**

#### GLOSSARY OF TERMS

1. **Critically evaluate:** Evaluate the evidence available to support the hypothesis.
2. **Outline:** Provide a summary of the important points.
3. **List:** Provide a list.
4. **Compare and contrast:** Provide a description of similarities and differences (eg. Table form).
5. **Management:** Generic term that implies overall plan. (includes diagnosis as well as treatment).
6. **Discuss:** Explain the underlying key principles. (this may include controversies /pros and cons).