Part 1 Primary Examination in Critical Care Medicine 2018 -**PAPER 1**
College of Critical Care Medicine
(under auspices of Critical Care Education Foundation)
Examination Endorsed by the International Board of Medicine & Surgery (IBMS), USA

Instructions: **Read the Instructions carefully**

1. Read the questions carefully and thoroughly. Candidates are advised to include in their answer only information that is relevant to the question and to write legibly.
2. **Short Notes in Section A and B: Each question carries 5 marks only.**
    a. You should not take more than 5 minutes per question in these sections.
    b. Normally one side of a fool-scape paper provided is enough as long paragraphs are not expected.
3. **Questions in Section C (Each question carries 10 marks only) and D: Each MCQ carries 1 mark only.**
    a. You should not take more than 10 minutes per question in section and 1 minute per question in Section D.
    b. Normally 2 side of a fool-scape paper provided is enough as long paragraphs are not expected.
    c. Section C has extra question. Choose ANY 4 out of 5 Choices below. DO NOT ANSWER ALL 5 QUESTIONS. Only first 4 will be marked.
4. **Start all questions on a NEW Page**
5. It is not required to rewrite the question in your answer book. **CLEARLY write the ANSWER NUMBER** before your answer.
6. The questions in each section are worth equal marks.
7. Record your candidate ROLL number on top of each answer sheet paper (approx. 15 pages) in space provided.
8. Candidates fail or loose marks in questions for one or more of the following reasons:
    a. Insufficient knowledge of the topic in question.
    b. Insufficient detail and/or depth of the answer.
    c. Lack of specificity and precision in the answers
    d. Poorly structured answer.
    e. Failure to answer the question as asked.
    f. Omission of all or part of the question.
9. The candidate has to demonstrate performance consistent with that of a competent senior registrar.

GLOSSARY OF TERMS

- **Critically evaluate:** Evaluate the evidence available to support the hypothesis.
- **Outline:** Provide a summary of the important points.
- **List:** Provide a list.
- **Compare and contrast:** Provide a description of similarities and differences
- (E.g. Table form).
- **Management:** Generic term that implies overall plan. Where appropriate, may include diagnosis as well as treatment.
- **Discuss:** Explain the underlying key principles. Where appropriate, this may include controversies and/or pros and cons

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SECTION A (5 marks each)	
Q. 1.	a) Classify acute coronary syndromes (ACS)? b) What is the role of antiplatelet medications in ACS?
Q. 2.	Enumerate biochemical features of Tumor Lysis Syndrome?
Q. 3.	67 yr man with septic shock is on ventilator and vasopressor infusions. On 3rd day troponin level is raised to > 5 times upper limit of normal. List possible causes for the high troponin level in given scenario?
Q. 4.	Enumerate possible precipitants of acute respiratory failure in COPD patients?
Q. 5.	Discuss endoscopic therapeutic options in a patient with non-variceal upper GI bleeding?

SECTION B (5 marks each)	
Q. 6	List the possible causes of anaemia in critically ill patients with long ICU stays?
Q. 7.	Outline the pathophysiology and management of neurogenic pulmonary edema after severe head injury?
Q. 8.	Give the pharmacological antidotes for each of the drugs listed below. a) Digoxin b) Paracetamol c) Fentanyl d) Diazepam e) Lignocaine
Q. 9.	What are pros and cons of "sedation holiday" in critically ill ventilated patient?
Q.10.	List possible complications of long term use of Amiodarone?

SECTION C: ANSWER ANY 4 ONLY (10 marks each)	
Q.11.	In a patient with Pulmonary Embolism, briefly discuss the advantages and disadvantages of each of the following diagnostic tests: a) Echocardiography b) CT pulmonary angiogram (CTPA) c) Serum troponin d) D-dimer levels
Q.12.	66 yr diabetic male admitted for severe community acquired pneumonia is noted to have fast atrial fibrillation. He had ischemic cerebrovascular stroke many years back from which he has recovered. Outline your approach to the management (short term and long term) of atrial fibrillation in this patient?
Q.13.	63 yr man is admitted unconscious following road traffic accident. He has obvious chest and limb injuries. Outline your initial management approach for this patient?
Q.14.	48 yr male with alcoholic liver disease is admitted with gradually worsening conscious level over the last 24 hours. You are strongly suspecting hepatic encephalopathy in this patient. a) List five alternative diagnoses that you would consider in this patient? b) Discuss the management of severe hepatic encephalopathy in this setting?
Q.15.	a) List absolute and relative contraindications for thrombolysis in patients with myocardial infarction? b) What are the mechanical complications of MI?

SECTION D (10 marks)

6. ECG changes of Hypokalemia are all EXCEPT?

A.	Flattening of T wave
B.	ST depression
C.	Bundle branch block
D.	Prolonged QT interval
E.	Prominent U wave

7. Enzyme marker of malignant hyperthermia is?

A.	Serum CPK
B.	LDH
C.	SGOT
D.	SGPT
E.	BNP

8. Which of the following conditions is LEAST likely to be associated with an increased end-tidal to arterial CO2 tension difference?

A.	Fat embolism.
B.	Chronic Obstructive Pulmonary Disease.
C.	Air embolism.
D.	Cardiogenic shock.
E.	Lobar pneumonia.

9. Which of the following is INCORRECTLY paired?

A.	Conn's syndrome and metabolic alkalosis
B.	Uretero-colic anastomosis and hyperchloraemic acidosis
C.	Shock and metabolic acidosis
D.	High altitude and respiratory acidosis
E.	Pancreatic fistula and metabolic acidosis

10. Which of the following has NOT been shown to reduce mortality after a myocardial infarction?

A.	Aspirin.
B.	Nitrates.
C.	Beta blocker
D.	Ace inhibitor
E.	Statin

11. In a patient on mechanical ventilator, at the time of initiating ventilation the peak airway pressure is 34 mmHg and the plateau pressure is 10 mmHg. This patient is most likely suffering from?

A.	ARDS
B.	Bronchial asthma.
C.	Acute infective polyneuritis
D.	Pneumothorax
E.	Pneumonia

12. Most potent respiratory stimulant is?

A.	Oxygen
B.	Carbon dioxide
C.	H+
D.	K+
E.	HCO3

13. A 60 yr old man presented in shock. His presenting ECG shows atrial flutter. Most appropriate management would be?

A.	IV digoxin.
B.	IV diltiazem
C.	Cardioversion with 100 joules
D.	Cardioversion with 250 joules.
E.	IV adenosine.

14. The highest concentration (mg/ml) of fibrinogen is found in:

A.	Fresh frozen plasma.
B.	Cryoprecipitate.
C.	Cryosupernate.
D.	Platelet concentrate.
E.	Salt-poor albumen.

15. At presentation of acute pancreatitis, all the following predict a poor prognosis EXCEPT:

A.	hematocrit above 44%
B.	albumin <3.0 g/dL
C.	LDH >500 U/dL
D.	lipase >600 U/L
E.	PO2 < 60 mmHg

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SECTION D Answers:

MCQ 1	
MCQ 2	
MCQ 3	
MCQ 4	
MCQ 5	
MCQ 6	
MCQ 7	
MCQ 8	
MCQ 9	
MCQ 10	