

**EMERGENCY MEDICINE**

**PAPER-I**

Time: 3 hours  
Max. Marks:100

EM/D/19/52/I

**Important Instructions:**

- Attempt all questions in order.
- Each question carries 10 marks.
- Read the question carefully and answer to the point neatly and legibly.
- Do not leave any blank pages between two answers.
- Indicate the question number correctly for the answer in the margin space.
- Answer all the parts of a single question together.
- Start the answer to a question on a fresh page or leave adequate space between two answers.
- Draw table/diagrams/flowcharts wherever appropriate.

**Write short notes on:**

- a) Pathophysiology of hemorrhagic shock in trauma. 4+2+2+2
  - b) Permissive hypotension – indications and contraindications.
  - c) Classification of hemorrhagic shock in trauma.
  - d) ABC score for massive transfusion protocol.
- a) Pathophysiology of sepsis and septic shock. 4+3+3
  - b) Various scoring systems for early identification of sepsis in emergency.
  - c) Pathway of lactate production and its significance for emergency physician.
- a) Mechanisms of blood flow during CPR. 3+3+4
  - b) Resuscitative thoracotomy.
  - c) Therapeutic hypothermia.
- a) Draw a well- labelled diagram of circle of Willis. 4+3+3
  - b) Describe Monro-Kellie doctrine and autoregulation.
  - c) Enumerate the anatomical and physiological risk factors of acute ischemic stroke.
- a) Draw the anatomy of ankle joint. Describe the assessment of Lisfranc injury. 4+3+3
  - b) Discuss the anatomy of shoulder joint. Describe the various types of shoulder dislocation.
  - c) Describe the assessment of scaphoid lunate dislocation.
- a) Describe the pathophysiology of fever in pediatrics and elderly population. 4+2+4
  - b) Antipyretics and analgesics used in ED.
  - c) Elaborate on the pathophysiology of hypothermia. Enumerate the causes of hypothermia in adults.

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| 7.  | a) Describe pathophysiology of ARDS in dengue and malaria.<br>b) Enumerate the steps of Drug assisted intubation for trauma victim.<br>c) High Flow oxygen therapy – indications, contraindications and proven benefits.   | 4+3+3   |
| 8.  | a) Describe various clinical decision making rules for management and disposition of Low-risk chest pain.<br>b) Describe the anatomy of coronary circulation.<br>c) Draw Einthoven's Triangle.   | 4+4+2   |
| 9.  | a) Enumerate the causes and diagnostic algorithm of hypernatremia.<br>b) Describe the approach to diagnosis of mixed acid base disorder from ABG analysis.<br>c) Describe the physiology and pathophysiology of Potassium homeostasis.                           | 4+3+3   |
| 10. | a) Describe pulse-echo principle.<br>b) Describe ALARA principle.<br>c) Discuss the role of Lung Ultrasound in diagnosis of critical clinical conditions. Enumerate the artifacts observed.<br>d) Describe utility of low frequency probes during resuscitation. | 2+2+4+2 |

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