

**POSTGRADUATE INSTITUTE OF MEDICINE**  
**UNIVERSITY OF COLOMBO**

**SELECTION EXAMINATION FOR MD (EMERGENCY MEDICINE)**  
**APRIL/JUNE 2016**

**Date :- 2<sup>nd</sup> June 2016**

**Time :- 1.00 p.m. – 4.00 p.m.**

**ESSAY PAPER**

**Answer all six (06) questions.**

**Answer each question in a separate book.**

1.

1.1. Explain the disabilities and deformities that occur when the radial nerve is damaged

1.1.1. in the axilla (20 marks)

1.1.2. in the spiral groove (05 marks)

1.1.3. within the supinator muscle (15 marks)

1.2. Briefly describe the compartments of the leg using a labelled diagram. (30 marks)

1.3. A 35 year old male presented with a sword cut injury to the anterior aspect of the left side of the neck, 2 cm above the clavicle.

1.3.1. Briefly describe the possible structures that can be damaged. (20 marks)

1.3.2. He was found to have a left sided pneumothorax. Explain the anatomical basis for the development of the pneumothorax. (10 marks)

Contd.../2-

- 2.
- 2.1. Draw and label the pressure-volume loop for the left ventricle during a cardiac cycle. (20 marks)
  - 2.2. Describe the events that take place at each phase of the pressure-volume loop that you mentioned above (2.1.). (30 marks)
  - 2.3. Draw the pressure-volume loop of the left ventricle in a patient with diastolic dysfunction. (10 marks)
  - 2.4. Explain how the cardiac output is altered during isotonic exercise. (40 marks)
3. A 15 year old girl was admitted to the Emergency Unit with acute severe asthma.
- 3.1. Name **two (02)** medicines indicated in her initial management, giving the routes of administration. (10 marks)
  - 3.2. Explain briefly the pharmacological basis of selecting the medicines and routes of administrations you have given above in 3.1. (40 marks)

When the patient was being discharged, it was decided to start her on inhaled corticosteroid prophylaxis.

- 3.3. Name **two (02)** corticosteroids that can be given to her for prophylaxis. (10 marks)
- 3.4. Write **two (02)** side-effects of long term use of inhaled corticosteroids (10 marks)
- 3.5. Name the device you would recommend to administer inhaled corticosteroids to this patient. (10 marks)
- 3.6. Write **four (04)** instructions you will give the patient on the use of inhaled corticosteroids. (20 marks)

- 4.
- 4.1. What is measured by pulse oxymetry? (10 marks)
  - 4.2. Briefly describe the physical principle of pulse oxymetry. (40 marks)
  - 4.3. Explain basis on which the pulse oxymeter predominantly detects arterial saturation and not the venous saturation. (20 marks)
  - 4.4. Briefly describe the uses and limitations of pulse oxymetry. (30 marks)
- 5.
- 5.1. Define systemic inflammatory response syndrome (SIRS). (10 marks)
  - 5.2. Explain the differences or relationship between infection, sepsis, septic shock, multi organ dysfunction syndrome and systemic inflammatory response syndrome (SIRS). (20 marks)
  - 5.3. Name **two (02)** biochemical markers which are useful in the diagnosis of sepsis. (10 marks)
  - 5.4. Briefly describe the pathophysiology of systemic inflammatory response syndrome (SIRS). (30 marks)
  - 5.5. Name **four (04)** biochemical tests to be used the diagnostic work-up of SIRS (10 marks)
  - 5.6. List **four (04)** potential complications of systemic inflammatory response syndrome (SIRS). (20 marks)
- 6.
- 6.1.
    - 6.1.1. Define Triage. (10 marks)
    - 6.1.2. Discuss the principals of triage process in case of a disaster. (40 marks)
  - 6.2. Discuss the advantages of having a pre hospital care system in mass casualty management. (50 marks)