


<p>Tanta University</p> <p>Faculty of Medicine</p> <p>Anesthesia, SCC& Pain MedicineDep.</p> <p>Date: 18 / 8 /2018</p>	<p>Exam: 1st part of MD (Physiology)</p> <p>No. of Questions: 3</p> <p>Time allowed: 3 hours</p> <p>Total marks: 45</p>	
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Q 1. The liver is the largest internal organ and the largest gland in the body:

- A. Outline hepatic blood flow. Contrast the implications of anesthesia and surgery on it.(4 marks)
- B. Define the normal values of plasma proteins. Where is albumin produced? What are the main functions of plasma proteins? (4 marks)
- C. Mention the causes of decreased plasma albumin. What are the implications of low plasma protein levels in surgical patients? (5 marks)
- D. Should low albumin be corrected in critically ill patient? (2 marks)

Q 2. The primary functions of the respiratory system are delivery of O₂ to tissue and elimination of CO₂ from it:

- A. Outline changes in oxygen tension from atmospheric air to tissues at sea level.
(4 marks)
- B. Define functional residual capacity and closing volume. Discuss their changes in elderly patient undergoing upper abdominal surgery.(4 marks)
- C. Contrast factors affecting oxygen and carbon dioxide transport across alveolar-capillary membrane.(3 marks)
- D. Explain physiological basis of hypoxemia due to hypoventilation.(4 marks)

Q 3. Homeostasis is the ability of the body to maintain its environment within the physiological functions including but not limited to prevention of intravascular thrombosis:

A. Outline the physiological basis of the coagulation.(3 marks)

B. Describe the process of fibrinolysis. (2 marks)

C. Explain with examples the increased risk of perioperative venous thromboembolism.(5 marks)

D.Explain the triad of death complicating a patient with poly-trauma.(5 marks)

.....GOOD LUCK.