


<p style="text-align: center;">Tanta University Faculty of Medicine Anesthesia, SICU & Pain Medicine Dep. Date: 21 / 3 / 2021</p>	<p style="text-align: center;">Exam: MD – 1st Semester: Pharmacology No. of Questions: 4 Times allowed: 3 hours Total marks: 45 marks</p>	
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1- A 69-year-old man with triple-vessel coronary artery disease, hypertension, is scheduled for coronary artery bypass grafting (CABG). He is taking beta blocker (metoprolol) and angiotensin-converting enzyme inhibitor (lisinopril). His blood pressure (BP) is 130/80 mmHg, and his heart rate (HR) is 55 beats per minute. (13marks)

- a- Would you continue *B-blocker* on the day of surgery? Justify your answer (3marks)
- b- What is the role of *B-blocker* in treating congestive heart failure? (3marks)
- c- Would you continue angiotensin- converting enzyme inhibitor (ACE) on the day of surgery? Justify your answer (3marks)
- d- If the patient who is on lisinopril develops hypotension intra-operatively, how would you manage it?(4M)

2- Magnesium plays a fundamental role in many cellular functions, and thus there is increasing interest in its role in clinical medicine. Discuss magnesium therapy for anesthesia, ICU and pain management and explain the mechanism of action of each (10marks)

3- A 28-year-old woman with a history of myasthenia gravis (MG) presents for thoracoscopic surgery and complete thymectomy. Her current medications are pyridostigmine (Mestinon) 60 mg TID & prednisone 10 mg QD. Discuss the safety use of neuromuscular blocking agent in patients with myasthenia gravis. (10 marks)

4- A 44-year old man was referred to the pain clinic for evaluation & management of abdominal pain. He was recently diagnosed with adenocarcinoma of the pancreas. She was given Tramadol SR 100mg bid.

- a- What is mechanism of action of opioids? (2 marks)
- b- Discuss opioid-related side effects? (2 marks)
- c- Discuss Difference between tolerance and physical dependence (2 marks)
- d- How would you treat opioid induced side effect? (2 marks)
- e- Discuss structure, mechanism of action, and dosing of Tramadol. (2 marks)
- f- In cancer pain management, what are adjuvant drugs you should considered to enhance pain relief? (2M)

GOOD LUCK.