1) A 3- year- old child with difficult venous access is scheduled to undergo correction of strabismus surgery.

A) Which inhalational agent can be used for induction of anesthesia for this patient? Justify your answer. (3marks)

B) What are the factors affecting the alveolar fraction of the inhalational anesthetics? (4marks)

C) The MAC is a unique pharmaco-dynamic character of each inhalational anesthetic, give an account on its definition- importance- types- and factors affecting it (4marks).

2) Muscle relaxation is a routine part of the anesthesiologist's daily practice.

A) What is the expected evoked response to peripheral nerve stimulation to muscle relaxants (add illustration to your answer)? (4marks)

B) Describe the metabolism and elimination of muscle relaxants (4marks)

C) What is the role of sugammadex in reversal of muscle relaxants (mechanism, dose, the difference from neostigmine). (3marks)

3) An anxious 54-year- old woman with fracture lower end of the femur received femoral nerve block for postoperative pain relief, 5 minutes later she complained of circumoral numbness tongue parathesia and dizziness .

A) Summarize the factors that may influence local anesthetic action? (4marks)

B) Describe the clinical presentations and outline your management of suspected local anesthetic toxicity (4marks)

C) What are the factors which predispose a patient to local anesthetic toxicity? (3marks)

4) Give an account on pharmacology (mechanism of action and adverse effects of):

A) A drug of choice used in treatment of anaphylactic shock. (3marks)

B) Antiemetic drugs acting on dopamine receptors. (3marks)

5) Mention the adverse effects of drugs that can be used in treatment of:

A) Brady arryhthemia. (3marks)

B) Uterine relaxation. (3marks)

GOOD LUCK