1. The following statements about **infiltrated anesthetics** are true EXCEPT:
   a. The maximum safe pediatric dose of lidocaine without epinephrine is 4.5 mg/kg while the maximum safe dose of lidocaine with epinephrine is 7 mg/kg.
   b. Bupivocaine infiltration provides local anesthesia for up to 4 to 6 hours, but takes 8-12 minutes for anesthesia to develop after injection.
   c. Diphenhydramine is an antihistamine with anesthetic properties that can be injected as a local anesthetic.
   d. To reduce the pain of injection, sodium bicarbonate can be added to the local anesthetic and it will lengthen the shelf life of the drug.

2. **Topical anesthetics for laceration repair:** Comparing LET (lidocaine, epinephrine, tetraacaine) to TAC (tetracaine, adrenaline, cocaine) as a topical anesthetic, which one of the following statements is false:
   a. LET is more expensive than TAC
   b. Cocaine is a controlled substance, which increases the amount of staff time to safeguard its storage, distribution, and disposal.
   c. TAC is potentially more toxic than LET because cocaine can cause hypertension, cardiac dysrhythmias, seizures, anxiety, fever, and even death in children.
   d. Bupivanor is an alternative to LET and TAC.

3. Which of the following statements about topical anesthetics is false?
   a. EMLA (eutectic mixture of local anesthetics with lidocaine and prilocaine) is used on intact skin to lessen the pain of needle sticks such as for a lumbar puncture.
   b. ELA-Max (4% lidocaine in a liposomal preparation) can be purchased over-the-counter without a prescription.
   c. Lidocaine iontophoresis (“Numby stuff”) has the advantage of greater depth of penetration of anesthesia in comparison to EMLA and ELA-Max.
   d. Vapocoolant sprays (Ethyl chloride, Fluori-Methane, and Fluro-Ethyl) are an alternative for transient local anesthesia on intact skin with a duration of effect of 5-10 minutes.

4. Ketamine typically has the following properties and effects (Choose all that apply):
   a. Hypotension
   b. Dissociative amnesia
   c. Mild bronchoconstriction
d. Preserves upper-airway muscular tone & protective airway reflexes 

5. Propofol 
   a. Has analgesic as well as sedative effects 
   b. May cause pain with infusion so adding 1 cc of 1% lidocaine to the first bolus can reduce the pain of the infusion 
   c. Causes tachycardia and hypertension 
   d. Increases intracranial pressure.

6. Regarding reversal agents, the following statements are true, EXCEPT: 
   a. Naloxone may be given IV, IM, or SQ 
   b. Nalmefene may last up to 210 minutes, but naloxone only lasts 20-40 minutes IV. 
   c. Flumazenil, the benzodiazepine antagonist, has a duration of action of 20-60 minutes 
   d. Contraindications to the use of flumazenil include: history of long-term benzodiazepine use or ingestion of drugs known to lower the seizure threshold such as tricyclic antidepressants, theophylline, isoniazide, lithium, or cyclosporine. 
   e. Naloxone completely reverses the chest-wall rigidity and laryngospasm that can be caused by rapid administration of large boluses of fentanyl.

7. Which of the following agents cannot be administered by the rectal route to induce sedation in children? 
   a. Chloral hydrate 
   b. Midazolam 
   c. Pentobarbital 
   d. Methohexital 
   e. Thiopental 
   f. Propofol

8. Methohexital 
   a. Is a short-acting benzodiazepine, which can be reversed with flumazenil. 
   b. Should not be given to patients with a history of temporal lobe epilepsy 
   c. Has unpredictable absorption when given by the rectal route 
   d. Has no effect on blood pressure

9. True or False: 
   DPT (the lytic cocktail of Demerol, Phenergen, and Thorazine) is an older but reliable and safe medication combination for pediatric procedural sedation.