1. A 67-year-old client is discharged from the hospital with a prescription for digoxin (Lanoxin) 0.25 mg daily. Which instruction should the nurse include in this client's discharge teaching plan? (2/150)
   a. Take the medication in the morning before rising.
   b. Take and record radial pulse rate daily.
   c. Expect some vision changes due to the medication.
   d. Increase intake of foods rich in Vitamin K.

2. Which symptoms are serious adverse effects of beta-adrenergic blockers such as propranolol (Inderal)? (6/150)
   a. Headache, hypertension, and blurred vision.
   b. Wheezing, hypotension, and AV block.
   c. Vomiting, dilated pupils, and papilledema.
   d. Tinnitus, muscle weakness, and tachypnea.

3. What medication is useful in treating digoxin (Lanoxin) toxicity? (7/150)
   a. Atropine sulfate (Atropine).
   b. Isoproterenol (Isuprel).
   c. Xylocaine (Lidocaine).
   d. Digoxin immune fab (Digibind).

4. When caring for a client on digoxin (Lanoxin) therapy the nurse knows to be alert for digoxin (Lanoxin) toxicity. Which finding would predispose this client to developing digoxin toxicity? (8/150)
   a. Low serum sodium.
   b. High serum sodium.
   c. Low serum potassium.
   d. High serum potassium.

5. A 78-year-old client with congestive heart failure receives a cardiac glycoside, digoxin (Lanoxin) 0.25mg po daily. Which observation by the nurse indicates that the medication has been effective? (9/150)
   a. Systolic blood pressure readings ranges from 120 to 130.
   b. Clear breath sounds anteriorly and posteriorly.
   c. Jugular venous distention present with supine positioning.
   d. Radial pulse volume of +4 bilaterally.

6. The physician prescribes digitalis (Digoxin) for a client diagnosed with congestive heart failure. Which intervention should the nurse implement prior to administering the digoxin? (11/150)
   a. Observe respiratory rate and depth.
   b. Assess the serum potassium level.
   c. Obtain the client's blood pressure.
   d. Monitor the serum glucose level.

7. A 59-year-old client with congestive heart failure is taking furosemide (Lasix) 40 mg twice daily. The nurse plans to monitor this client for development of which complication? (12/150)
   a. Hyponatremia.
   b. Hyperchloremia.
   c. Hypercalcemia.
   d. Hyponatremia.

8. A male client being discharged with a prescription for theophylline, a bronchodilator, tells the nurse that he understands he is to take three doses of the medication each day. Since, at the time of discharge, timed-release capsules are not available, which dosing schedule should the nurse advise the client to follow? (14/150)
   a. 9 a.m., 1 p.m., and 5 p.m.
   b. 8 a.m., 4 p.m., and midnight.
   c. Before breakfast, before lunch and before dinner.
   d. With breakfast, with lunch, and with dinner.
9. A 75-year-old male client taking hydrochlorothiazide (HCTZ) is admitted to the hospital having "palpitations" and "skipped heart beats." What is the most likely cause of these symptoms given the client's medication history? (15/150)
   a. Hypokalemia.
   b. Hypermagnesemia.
   c. Hyperchloremia.
   d. Hyponatremia.

10. Vancomycin (Vancocin) is prescribed for a client who has a history of endocarditis and is to undergo minor dental surgery. The nurse knows that this drug (16/150)
   a. should be administered IM.
   b. may be administered sub-q.
   c. should always be administered IV.
   d. may be administered po.

11. Alteration of which laboratory finding represents achievement of a therapeutic goal for heparin administration? (17/150)
   a. Prothrombin time.
   b. Fibrin split products.
   c. Platelet count.
   d. Partial thromboplastin time.

12. A client receiving a continuous infusion of heparin intravenously starts to hemorrhage from an arterial access site. What medication should the nurse anticipate administering to prevent further heparin-induced hemorrhaging? (18/150)
   a. Vitamin K (Aquamephyton).
   b. Protamine sulfate.
   c. Warfarin sodium (Coumadin).
   d. Prothrombin.

13. A client taking furosemide (Lasix), reports difficulty sleeping. What question is important for the nurse to ask the client? (20/150)
   a. What dose of medication are you taking?
   b. Are you eating foods rich in potassium?
   c. Have you lost weight recently?
   d. At what time do you take your medication?

14. A female client who has started taking long-term corticosteroid therapy tells the nurse that she is careful to take her daily dose at bedtime with a snack of crackers and milk. What is the best response by the nurse? (22/150)
   a. Advise the client to take the medication in the morning, rather than at bedtime.
   b. Teach the client that dairy products should not be taken with her medication.
   c. Tell the client that absorption is improved when taken on an empty stomach.
   d. Affirm that the client has a safe and effective routine for taking the medication.

15. The nurse has completed diabetic teaching for a client who has been newly diagnosed with diabetes mellitus. Which statement by this client would indicate to the nurse that further teaching is needed? (24/150)
   a. "Regular insulin can be stored at room temperature for 30 days."
   b. "My legs, arms, and abdomen are all good sites to inject my insulin."
   c. "I will always carry hard candies to treat hypoglycemic reactions."
   d. "When I exercise, I should plan to increase my insulin dosage."

16. A client asks the nurse if glipizide (Glucotrol) is an oral insulin. What is the correct answer for the nurse to provide? (25/150)
   a. "Yes, it is an oral insulin and has the same actions and properties as intermediate insulin."
   b. "Yes, it is an oral insulin and is distributed, metabolized, and excreted in the same manner as insulin."
   c. "No, it is not an oral insulin and can be used only when some beta cell function is present."
   d. "No, it is not an oral insulin, but it is effective for those who are resistant to injectable insulins."
17. The nurse gives a client NPH insulin 15 units subcutaneously before breakfast (7:30 a.m.). At what time should the nurse be particularly alert for signs or symptoms of a potential hypoglycemic reaction? (26/150)
   a. 8:30 to 11:30 a.m.
   b. 1:30 to 3:30 p.m.
   c. 7:30 to 9:30 p.m.
   d. 12:00 midnight.

18. The nurse is preparing a teaching plan for a client who is newly diagnosed with type 1 diabetes mellitus. Which signs and symptoms should the nurse describe when teaching the client about hypoglycemia? (27/150)
   a. Sweating, trembling, tachycardia.
   b. Polyuria, polydipsia, polyphagia.
   c. Nausea, vomiting, anorexia.
   d. Fruity breath, tachypnea, chest pain.

19. A 43-year-old female client is receiving thyroid replacement hormone following a thyroidectomy. What adverse effects associated with thyroid hormone toxicity should the nurse instruct the client to report promptly to the physician? (29/150)
   a. Tinnitus and dizziness.
   b. Tachycardia and chest pain.
   c. Dry skin and intolerance to cold.
   d. Weight gain and increased appetite.

20. The nurse is preparing a teaching plan for a client who has received a new prescription for levothyroxine sodium (Synthroid). Which instruction should be included? (30/150)
   a. “Take this medication with a high protein snack at bedtime.”
   b. “You may change at anytime to a less expensive generic brand.”
   c. “Take your pulse daily, and if it exceeds 100, contact the physician.”
   d. “Return to the clinic weekly for serum blood glucose testing.”

21. The physician prescribes aluminum and magnesium hydroxide (Maalox), 1 tablet PO PRN, for a client with chronic renal failure who is complaining of indigestion. What intervention should the nurse implement? (32/150)
   a. Administer 30 minutes before eating.
   b. Evaluate the effectiveness 1 hour after administration.
   c. Instruct the client to swallow the tablet whole.
   d. Question the physician’s prescription.

22. Which antidiarrheal agent should be used with caution in clients taking high dosages of aspirin for arthritis? (34/150)
   a. Loperamide (Imodium).
   b. Probanthine (Propantheline).
   c. Bismuth subsalicylate (Pepto Bismol).
   d. Diphenoxylate hydrochloride with atropine (Lomitil).

23. A client with dysphagia has been diagnosed with duodenal ulcers and is being discharged from the hospital with a prescription for the proton pump inhibitor lansoprazole (Prevacid) 15mg PO daily. The medication comes in capsule form. What instruction should the nurse include in the discharge teaching plan for this client? (41/150)
   a. Capsule contents can be sprinkled on pudding or applesauce.
   b. Chew the medication thoroughly to enhance absorption.
   c. Take the drug at the same time as famotidine (Pepcid).
   d. This drug must be ingested 30 minutes after a meal.
24. A 52-year-old client is admitted to the hospital for possible duodenal ulcers. The physician prescribes ranitidine hydrochloride (Zantac) 150 mg b.i.d., PO. Which data would indicate that this medication is effective? (42/150)
   a. Analysis of gastric secretions indicate a pH level below 3.
   b. Hemoccult testing is positive on 2 different occasions.
   c. The client reports a decrease in the epigastric "burning."
   d. Within 4 hours after eating, the client denies having pain.

25. A 46-year-old female client is instructed to take Lugol's solution (strong iodine solution) in preparation for thyroidectomy surgery. Which food should the nurse instruct this client to remove from her diet? (43/150)
   a. Canned vegetables.
   b. Cheeses.
   c. Citrus fruits.
   d. Shrimp.

26. An 83-year-old woman is recovering from a myocardial infarction. The cardiologist prescribes docusate sodium and casantrol (Peri-colace) 1 tab PO, b.i.d. What therapeutic effect does this medication provide for this client? (45/150)
   a. Maintaining soft stools to prevent straining on defecation.
   b. Increasing cardiac blood flow by dilating the coronaries.
   c. Replacing serum potassium lost with diuretic therapy.
   d. Preventing the occurrence of stress ulcers in the duodenum.

27. The physician has prescribed a low molecular weight heparin, enoxaparin (Lovenox), 30 mg IVP b.i.d. for a client following hip replacement. Prior to administering the first dose, which intervention is most important for the nurse to implement? (55/150)
   a. Assess the client's IV site for signs of inflammation.
   b. Evaluate the client's degree of mobility.
   c. Instruct the client regarding medication side effects.
   d. Contact the physician to clarify the prescription.

28. A client is receiving antiinfective drug therapy for a post-operative infection. Which complaint should alert the nurse to the possibility that the client has contracted a superinfection? (56/150)
   a. "My mouth feels sore."
   b. "I have a headache."
   c. "My ears feel plugged up."
   d. "I feel constipated."

29. The nurse is assessing the effectiveness of high dose aspirin therapy for an 88-year-old client with arthritis. The client reports that she is can't hear the nurse's questions because her ears are ringing. What action should the nurse implement? (59/150)
   a. Refer the client to an audiologist for evaluation of her hearing.
   b. Advise the client that this is a common side effect of aspirin therapy.
   c. Notify the health care provider of this finding immediately.
   d. Ask the client to turn off her hearing aid during the exam.

30. Which outcome would the nurse expect a client to have who is receiving cyclobenzaprine (Flexeril)? (61/150)
   a. Elevated mood with improved responsiveness to family.
   b. A decrease in joint pain experienced with osteoarthritis.
   c. Improved range of motion during physical therapy exercises.
   d. Fewer absence seizures with lengthened attention span.

31. A physician prescribes naloxone (Narcan) for a client in the emergency room. Which assessment data would indicate that the naloxone has been effective? (77/150)
   a. The client's statement that the chest pain is better.
   b. The client's respiratory rate is 16 breaths/minute.
   c. The client's seizure activity has stopped temporarily.
   d. The client's pupils are constricted bilaterally.
32. A client with cancer who has been receiving fentanyl (Duragesic) for several weeks reports to the nurse that the medication is not effectively controlling the pain. Which intervention should the nurse initiate? (81/150)
   a. Instruct the client about indications of opioid dependence.
   b. Monitor the client for symptoms of opioid withdrawal.
   c. Notify the physician of the need to increase the dose.
   d. Administer naloxone (Narcan) per PRN protocol for reversal.

33. Before administering an antiinfective agent to a client with a urinary tract infection, which nursing intervention is most important? (94/150)
   a. Obtain a clean catch urine specimen.
   b. Assess the urine pH for acidity.
   c. Insert an indwelling catheter.
   d. Assess for complaints of dysuria.

34. A client taking a thiazide diuretic for the past six months has a serum potassium level of 3.0. The nurse anticipates which change in prescription for the client? (96/150)
   a. The dosage of the diuretic will be decreased.
   b. The diuretic will be discontinued.
   c. A potassium supplement will be prescribed.
   d. The dosage of the diuretic will be increased.

35. Phenazopyridine (Pyridium) is commonly prescribed for clients with urinary tract infections. What statement should be included by the nurse when teaching clients about the administration of phenazopyridine (Pyridium)? (97/150)
   a. Stop taking the drug if the urine turns a red-orange color.
   b. This medication is an antispasmodic for bladder spasms.
   c. Take this medication with food to decrease gastric irritation.
   d. Take for the full two weeks to avoid growing resistant organisms.

36. A client has a positive skin test for tuberculosis. What prophylactic drug should the nurse expect to administer to this client? (104/150)
   a. Isoniazid (INH).
   b. Rifampin (Rifadin).
   c. Acyclovir (Zovirax).
   d. Griseofulvin (Grisactin).

37. The nurse is teaching a client proper use of an inhaler. When should the client administer the inhaler-delivered medication to demonstrate correct use of the inhaler? (110/150)
   a. Immediately after exhalation.
   b. During the inhalation.
   c. At the end of three inhalations.
   d. Immediately after inhalation.

38. Heparin 20,000 units in 500 ml D5W at 50 ml/hour has been infusing for 5 1/2 hours. How much heparin has the client received? (115/150)
   a. 11,000 units.
   b. 13,000 units.
   c. 15,000 units.
   d. 17,000 units.

39. A peak and trough level must be drawn for a client receiving antibiotic therapy. What is the optimum time for the nurse to obtain the trough level? (116/150)
   a. Sixty minutes after the antibiotic dose is administered.
   b. Immediately before the next antibiotic dose is given.
   c. When the next blood glucose level is to be checked.
   d. Thirty minutes before the next antibiotic dose is given.
40. The physician prescribes furosemide (Lasix) 15 mg IV stat. On hand is Lasix 20 mg/2ml. How many milliliters should the nurse administer? (119/150)
   a. 1.0 ml.
   b. 1.5 ml.
   c. 1.75 ml.
   d. 2.0 ml.

41. A client is to receive 10 mEq of KCl diluted in 250 cc of normal saline over 4 hours. At what rate should the nurse set the client's intravenous infusion pump? (123/150)
   a. 13 cc/hour.
   b. 63 cc/hour.
   c. 80 cc/hour.
   d. 125 cc/hour.

42. A client is taking hydromorphone (Dilaudid) PO q4h at home. Following surgery, Dilaudid IV q4h PRN and butorphanol tartrate (Stadol) IV q4h PRN are prescribed for pain. The client received a dose of the Dilaudid IV four hours ago, and is again requesting pain medication. What intervention should the nurse implement? (126/150)
   a. Alternate the two medications every four hours PRN for pain
   b. Alternate the two medications every two hours PRN for pain.
   c. Administer only the Dilaudid every four hours PRN for pain.
   d. Administer only the Stadol every four hours PRN for pain.

43. A client with congestive heart failure (CHF) is being discharged with a new prescription for captopril (Capoten), an angiotensin-converting enzyme (ACE) inhibitor. The nurse's discharge instruction should include reporting which problem to the health care provider? (129/150)
   a. Weight loss.
   b. Dizziness.
   c. Muscle cramps.
   d. Dry mucus membranes.

44. Following heparin treatment for a pulmonary embolism, a client is being discharged with a prescription for warfarin (Coumadin). In conducting discharge teaching, the nurse advises the client to have which diagnostic test monitored regularly after discharge? (130/150)
   a. Perfusion scan.
   b. Prothrombin Time (PT/INR).
   c. Activated partial thromboplastin (APTT).
   d. Serum Coumadin level (SCL).

45. The nurse would be correct in withholding a dose of digoxin in a client with congestive heart failure without specific instruction from the physician if which finding was documented? (131/150)
   a. Serum digoxin level is 1.5.
   b. Blood pressure is 104/68.
   c. Serum potassium level is 2.5.
   d. Apical pulse is 68/minute.

46. Following the administration of sublingual nitroglycerin, which assessment finding indicates the medication was effective? (133/150)
   a. Relief of chest pain.
   b. Clear bilateral breath sounds.
   c. Increase in blood pressure.
   d. Increase in urinary output.

47. A client is receiving propylthiouracil (PTU) prior to thyroid surgery. Which diagnostic test results indicate that the medication is producing the desired effect? (137/150)
   a. Increased hemoglobin and hematocrit.
   b. Increased serum calcium.
   c. Decreased white blood cell count (WBC).
   d. Decreased T3 and T4.
48. The physician prescribes an H2 antagonist, famotidine (Pepcid) 20 mg in the morning and at bedtime. What statement regarding the action of H2 antagonists offers the correct rationale for administering the medication at bedtime? (138/150)
   a. Gastric acid secreted at night is buffered, preventing pepsin formation.
   b. Hydrochloric acid secreted during the nighttime is blocked.
   c. The drug relaxes stomach muscles at night to reduce acid.
   d. Ingestion of the medication at night offers a sedative effect, promoting sleep.

49. A 45-year-old woman is receiving alprazolam (Xanax) for anxiety. Which client behaviors would indicate that the drug is effective? (141/150)
   a. Personal hygiene is maintained by the client for the first time in a week.
   b. The client has an average resting heart rate of 120 beats/minute.
   c. The staff observe the client sitting in the day room reading a book.
   d. The nurse records that the client lost two pounds of body weight in the past week.
ANSWERS and RATIONALES

1. **ANSWER: B**  
   **RATIONALE:** Monitoring pulse rate is very important when taking digoxin (Lanoxin) (B). The client should be further instructed to report pulse rates below 60 or greater than 110 and to withhold the dosage until consulting with a health care professional in such a case. (A) is not necessary. Visual changes are an indication of drug toxicity. The client should be instructed to report these immediately (C). A diet rich in Vitamin K is not necessary (D).

2. **ANSWER: B**  
   **RATIONALE:** AV block is generally associated with bradycardia and results in potentially life-threatening decreases in cardiac output. Additionally, wheezing secondary to bronchospasm and hypotension represent life-threatening respiratory and cardiac disorders, therefore these symptoms represent the most serious adverse effects of beta-blocking agents (B). (A, C, and D) are not associated with beta-blockers.

3. **ANSWER: D**  
   **RATIONALE:** Digibind (D) is an antibody which binds antigenically to unbound serum digoxin (Lanoxin) or digitoxin (Digitalis) resulting in renal excretion of the bound complex. Therefore it is useful in treating this type of drug toxicity. (A, B, and C) are not used to treat digitoxin (Lanoxin) toxicity.

4. **ANSWER: C**  
   **RATIONALE:** Hypokalemia (C) predisposes the client on digoxin to digoxin toxicity, usually presented as abdominal pain, anorexia, nausea, vomiting, visual disturbances, bradycardia, and AV disassociation. Assessment of serum potassium levels with prompt correction of hypokalemia are important interventions for the client taking digoxin.

5. **ANSWER: B**  
   **RATIONALE:** Digoxin improves cardiac contractility and decreases conduction, which will increase cardiac output. A decrease in pulmonary symptoms (B) indicates that the medication was effective in increasing the cardiac output. Digoxin (Lanoxin) does not directly affect the blood pressure (A). Jugular venous distention is a significant finding, if it was assessed with the head of the bed raised at least 30 degrees (C). A pulse volume of +4 is a bounding pulse, indicating fluid volume overload has not improved in the client with CHF (D).

6. **ANSWER: B**  
   **RATIONALE:** Hypokalemia (decreased serum potassium) will precipitate digitalis toxicity in persons receiving digoxin (B). The client's respiratory rate and blood pressure (C) will not affect the administration of digoxin. The client's glucose level (D) should be monitored if he/she is a diabetic and is perhaps receiving insulin.

7. **ANSWER: A**  
   **RATIONALE:** Furosemide (Lasix) potentiates the excretion of sodium, causing hyponatremia (A). (B, C, and D) are not related to furosemide (Lasix) administration.

8. **ANSWER: B**  
   **RATIONALE:** Theophylline should be administered on a regular around-the-clock schedule (B) to provide the best bronchodilating effect and reduce the potential for adverse effects. (A, C, and D) do not provide around-the-clock dosing. Food may alter absorption of the medication (D).

9. **ANSWER: A**  
   **RATIONALE:** The nurse should be alert for symptoms related to hypokalemia (A) in clients taking thiazide diuretics. (B and C) are not related to thiazide diuretics. Although hyponatremia (low sodium) may occur when taking thiazide diuretics, the symptoms described by this client are related to hypokalemia (low potassium), not hyponatremia (D).
10. **ANSWER: D**
   **RATIONALE:** Vancomycin, an anti-infective, is used to treat infections caused by severe staphylococcal infections that are unresponsive to other antibiotics. It is also used for endocarditis prophylaxis for dental procedures. It can be administered po (D), or IV (C), but is never IM (A) nor sub-q (B).

11. **ANSWER: D**
   **RATIONALE:** Heparin therapy is guided by changes in the partial thromboplastin time (PTT) (D). (A, B, and C) are not used to track the therapeutic effect of heparin administration.

12. **ANSWER: B**
   **RATIONALE:** Protamine sulfate (B) is the antagonist for heparin and is given for episodes of acute hemorrhage. (A, C, and D) are not heparin antagonists.

13. **ANSWER: D**
   **RATIONALE:** Because of the diuretic effect of Lasix, clients should take the medication in the morning to prevent nocturia. The nurse needs to first determine at what time of day the client takes the Lasix (D). (B) is not related to the insomnia. The actual dose of medication is of less importance than the time taken (C). Weight loss is valuable information about the effect of the diuretic, but is not likely to be related to insomnia.

14. **ANSWER: A**
   **RATIONALE:** Daily doses of long-term corticosteroid therapy should be administered in the morning (A), to coincide with the body’s normal secretion of cortisol. Client receiving long-term corticosteroids need to increase intake of calcium, which generally means an increase in dairy products (B). Corticosteroids often cause can cause GI distress, and should be administered with meals (C). The client has established a safe routine by taking the medication with a snack, but the routine will be more effective if taken in the morning (D).

15. **ANSWER: D**
   **RATIONALE:** Exercise helps to facilitate the entry of glucose into the cell, so increasing insulin doses with exercise would place the client at high risk for a hypoglycemic reaction (D). (A, B, and C) reflect accurate statements about the use of insulin and management of hypoglycemic reactions.

16. **ANSWER: C**
   **RATIONALE:** An effective oral form of insulin has not yet been developed (C) because when insulin is taken orally, it is destroyed by digestive enzymes. Glipizide (Glucotrol) is an oral hypoglycemic agent that enhances pancreatic production of insulin. (A, B, and D) do not provide accurate information that answers the client's question.

17. **ANSWER: B**
   **RATIONALE:** NPH, an intermediate acting insulin, peaks within 4 to 12 hours after subcutaneous injection, so the most likely time for this client to experience a hypoglycemic reaction is between 1:30 p.m. and 3:30 p.m. (B).

18. **ANSWER: A**
   **RATIONALE:** Sweating, dizziness, and trembling are signs of hypoglycemic reactions related to release of epinephrine as a compensatory response to the low blood sugar (A). (B, C, and D) do not describe common symptoms of hypoglycemia.

19. **ANSWER: B**
   **RATIONALE:** Thyroid replacement hormone increases the metabolic rate of all tissues, so common signs and symptoms of toxicity include tachycardia and chest pain (B). (A, C, and D) do not indicate a thyroid hormone toxicity.
20. **ANSWER: C**  
**RATIONALE:** Levothyroxine sodium (Synthroid) should be withheld if the pulse is over 100 beats per minute (C). To prevent insomnia, the daily dose should be taken early in the morning before breakfast, not at bedtime (A). Product brands should not be changed (B) without consulting the physician because the intended effects and side effects of different formulations of the medication can vary. Serum glucose (D) is not affected by thyroid preparations, so weekly blood testing is not required.

21. **ANSWER: D**  
**RATIONALE:** Magnesium agents are not usually used for clients with renal failure due to the risk of hypermagnesemia, so this prescription should be questioned by the nurse (D). Administering the drug before eating (A), evaluating effects within one hour (B), and instructing the client to swallow the tablet whole (C) are not recommended nursing actions for the administration of aluminum and magnesium hydroxide (Maalox).

22. **ANSWER: C**  
**RATIONALE:** Bismuth subsalicylate (Pepto Bismol) contains a subsalicylate that increases the potential for salicylate toxicity when used concurrently with aspirin (acetacylic acid, another salicylate preparation). (A, B, and D) do not pose the degree of risk of drug interaction with aspirin as bismuth subsalicylate (Pepto Bismol) would.

23. **ANSWER: A**  
**RATIONALE:** Lansapazole (Prevacid) is administered PO in capsule form. Capsules contain enteric-coated granules to prevent decomposition of the drug in the acidic pH of the stomach. The granules can be sprinkled on semi-solid foods such as pudding or applesauce (A) for those who have difficulty swallowing capsules. The medication should not be chewed (B) so that the enteric-coated granules can remain intact. This medication should not be taken concomitantly with H2-receptor blockers such as famotidine (Pepcid) (C). This drug should be administered 30 minutes before, not after, meals (D).

24. **ANSWER: D**  
**RATIONALE:** Lack of abdominal pain within 4 hours after eating indicates decreased duodenal irritation (D), a positive outcome in treatment of duodenal ulcer. Gastric secretions (A) would not offer an indication of the effectiveness of the medication. A positive hemoccult test on 2 occasions (B) indicates that duodenal bleeding may be unchecked, but that information is unrelated to the action of this medication. A decrease in epigastric “burning” (C) relates to control of gastroesophageal reflux, another indication for the use of this drug, but it is not indicative of control of duodenal ulcer pain.

25. **ANSWER: D**  
**RATIONALE:** Shrimp, oysters, and other shelled seafoods are iodine-rich foods which act as antagonists to Lugol’s solution, so they should be avoided by this client (D). (A and B) can be safely consumed when the client is taking Lugol’s solution.

26. **ANSWER: A**  
**RATIONALE:** Docusate sodium and sasantrol (Peri-colace) is a stool softener that prevents the use of Valsalva’s maneuver (straining) for defecation (A). The therapeutic effects described in (B, C, and D) are not related to the use of this medication.

27. **ANSWER: D**  
**RATIONALE:** Lovenox is a low molecular weight heparin which can only be administered subcutaneously, so the nurse should contact the physician to clarify the route of administration (D). (A and B) are important nursing interventions, but not necessary to the administration of this medication. The client should be instructed about medication side effects (C), but this is of less priority than obtaining a correct prescription.

28. **ANSWER: A**  
**RATIONALE:** Stomatitis caused by a thrush infection, which can cause mouth pain, are signs of superinfection (A). (B, C, and D) are symptoms more typical of side effects, rather than a superinfection.
29. **ANSWER: C**  
**RATIONALE:** Tinnitus is an early sign of salicylate toxicity. The health care provider should be notified immediately (C), and the medication discontinued. (A and D) are not needed, and (B) is inaccurate.

30. **ANSWER: C**  
**RATIONALE:** Cyclobenzaprine (Flexeril) is a central skeletal muscle relaxant used to relieve muscle spasms, so improved range of motion (C) would be an expected outcome of therapy. It does not have analgesic properties, so it would not be used to control joint pain (B). Although it is related to tricyclic antidepressants, it is not effective with depression (A) or treatment of seizures (D).

31. **ANSWER: A**  
**RATIONALE:** Naloxone (Narcan) is a narcotic antagonist that reverses the respiratory depression effects of opiate overdose, so assessment of a normal respiratory rate (B) would indicate that the respiratory depression has been halted. (A, C, and D) are not related to naloxone (Narcan) administration.

32. **ANSWER: C**  
**RATIONALE:** Clients can develop a tolerance to the analgesic effect of opioids, and may require an increased dose (C) for effective long term pain relief. The client is not exhibiting indications of dependence (A), withdrawal (B), or toxicity (D).

33. **ANSWER: A**  
**RATIONALE:** A clean catch urine specimen (A) is used to determine the causative organism, and to evaluate the effectiveness of pharmacologic therapy in treating the source of the infection. The initial specimen should be obtained prior to beginning treatment with the antiinfective agent (A). (B, C, and D) are not essential to complete prior to administration of the antiinfective.

34. **ANSWER: C**  
**RATIONALE:** This client's potassium level is too low (normal is 3.5-5.0). Taking a thiazide diuretic often results in a loss of potassium, so a potassium supplement needs to be prescribed to restore a normal serum potassium level (C). (A, B, and D) are not recommended actions for restoring a normal serum potassium level.

35. **ANSWER: C**  
**RATIONALE:** Phenazopyridine (Pyridium), a urinary analgesic used to relieve pain associated with chronic urinary tract infections, can be taken with food to decrease gastric irritation (C). It will typically cause the urine to turn a red-orange color, so it should not be discontinued if this occurs (A). It is not effective in relieving bladder spasms (B). Pyridium should only be used for 2 days (D) when taken together with an antibacterial agent, which is typically prescribed for approximately 2 weeks.

36. **ANSWER: A**  
**RATIONALE:** Isoniazid (INH) is the drug of choice for treatment of clients with positive skin tests for tuberculosis (A).

37. **ANSWER: B**  
**RATIONALE:** The client should be instructed to deliver the medication during the last part of inhalation (B). After the medication is delivered, the client should remove the mouthpiece, keeping his/her lips closed and breath held for several seconds to allow for distribution of the medication. The client should not deliver the dose immediately after exhalation (A) or after inhalation (D), and should deliver no more than two inhalations at a time (C).

38. **ANSWER: A**  
**RATIONALE:** (A) is the correct calculation: 20,000 units/500 ml = 40 units (the amount of units in one ml of fluid). 40 units/ml x 50 ml/hr = 2,000 units/hour (1,000 units in 1/2 hour). 5.5 x 2,000 = 11,000 (A). OR, multiply 5 x 2,000 and add the 1/2 hour amount of 1,000 to reach the same conclusion = 11,000 units.
39. **ANSWER: B**  
**RATIONALE:** Trough levels are drawn when the blood level is at its lowest, which is typically just before the next dose is given (B). (A, C, and D) do not describe the correct time for obtaining a trough level of an antibiotic.

40. **ANSWER: B**  
**RATIONALE:** (B) is the correct calculation: Dosage on hand/amount on hand = Dosage desired/x amount.  
20mg : 2ml = 15mg : x . 20x = 30. x = 30/20; = 1 1/2 or 1.5 ml.

41. **ANSWER: B**  
**RATIONALE:** (B) is the correct calculation: To calculate this problem correctly, remember that the dose of KCl is not used in the calculation.  
250 cc/4 hours = 63 cc/hour.

42. **ANSWER: C**  
**RATIONALE:** Dilaudid is an opioid agonist. Stadol is an opioid agonist-antagonist. Use of an agonist-antagonist for the client who has been receiving opioid agonists may result in abrupt withdrawal symptoms, and should be avoided (C). (A, B, and D) do not reflect good nursing practice.

43. **ANSWER: B**  
**RATIONALE:** Angiotensin-converting enzyme (ACE) inhibitors are used in CHF to reduce afterload by reversing vasoconstriction common in heart failure. This vasodilation can cause hypotension and resultant dizziness (B). Weight loss (A) is desired if fluid overload is present, and may occur as the result of effective combination drug therapy such as diuretics with ACE inhibitors. Muscle cramps (C) often indicate hypokalemia in the client receiving diuretics. Excessive diuretic administration may result in fluid volume deficit, manifested by symptoms such as (D).

44. **ANSWER: B**  
**RATIONALE:** When used for a client with pulmonary embolus, the therapeutic goal for warfarin therapy is a PT 1 1/2 - 2 1/2 times greater than the control, or an INR of 2 to 3 (B). A perfusion might be performed to monitor lung function, but not monthly (A). APTT is monitored for the client receiving heparin therapy (C). A blood level for Coumadin cannot be measured (D).

45. **ANSWER: C**  
**RATIONALE:** Hypokalemia (C) can precipitate digitalis toxicity in persons receiving digoxin, which will increase the chance of dangerous dysrhythmias (normal potassium 3.5-5.5 mEq/L). The therapeutic range for digoxin is 0.8 to 2 ng/ml (toxic levels = >2 ng/ml); (A) is within this range. (B) would not warrant the nurse withholding the digoxin. The nurse should withhold the digoxin if the apical pulse is less than 60/min (D).

46. **ANSWER: A**  
**RATIONALE:** Nitroglycerin reduces myocardial oxygen consumption which decreases ischemia and reduces chest pain (A). (B, C, and D) are not expected outcomes of sublingual nitroglycerin.

47. **ANSWER: D**  
**RATIONALE:** Propylthiouracil (PTU) is an adjunct therapy used to control hyperthyroidism by inhibiting production of thyroid hormones (D). It is often prescribed in preparation for thyroidectomy or radioactive iodine therapy. It is does not impact hemoglobin and hematocrit levels (A). Serum calcium (B) must be monitored after surgery in case parathyroid glands were removed, but preoperative PTU does not increase serum calcium. If the client has an infection preoperatively, antibiotics will be given and WBC (C) monitored.

48. **ANSWER: B**  
**RATIONALE:** H2 antagonists act on the parietal cells to inhibit gastric secretion (B). Some gastric secretion occurs all of the time, even when the stomach is empty, unless medications are taken to inhibit this action. Famotidine does NOT relax smooth muscle (C) nor provide a sedative effect (D). Antacids are the substances which buffer gastric acid and prevent pepsin formation (A). Antacids do not influence healing nor prevent recurrence of ulcers; they merely provide symptomatic relief. This difference between H2 antagonists and antacids is important when teaching clients.
49. **ANSWER: C**

**RATIONALE:** The ability to sit and concentrate on reading (C) indicates decreased anxiety. (A, B, and D) are not related to the use of alprazolam (Xanax) for anxiety.