MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

1) A client receives theophylline (Theo-Dur) and calls the clinic to say he has had nausea and vomiting for two days. What is the best action by the nurse?
   A) Recommend that the client begin a clear liquid diet.
   B) Ask the client if he has eaten at any unclean restaurants.
   C) Ask the client if he has been exposed to anyone with the flu.
   D) Tell the client to come to the clinic for an assessment.

2) The nurse teaches a medication class on bronchodilators for clients with asthma. The nurse evaluates that learning has occurred when the clients make which statement?
   A) "The medication widens our airways because it stimulates the fight-or-flight response of our nervous system."
   B) "The medication widens our airways because it decreases the production of mucous that narrows our airways."
   C) "The medication widens our airways because it acts on the parasympathetic nervous system."
   D) "The medication widens our airways because it decreases the production of histamine that narrows our airways."

3) The client receives isoproterenol (Isuprel) via inhalation. The nurse determines that the client is experiencing a side effect of this medication when reviewing which laboratory test?
   A) Glucose of 145
   B) Sodium of 160
   C) Creatinine of 1.0 mg/dl
   D) AST of 20 units/L

4) The client asks the nurse why she must continue taking her asthma medication even though she has not had an asthma attack in several months. What is the best response by the nurse?
   A) "The medication needs to be taken or your lungs will be severely damaged and we will not be able to stop an acute attack."
   B) "The medication is still needed to decrease inflammation in your airways and help prevent an attack."
   C) "The medication needs to be taken indefinitely according to your doctor, so you should discuss this with him."
   D) "The medication needs to be taken for at least a year; then, if you have not had an acute attack, you can stop it."
5) The client receives ipratropium (Atrovent) via inhalation for the treatment of chronic asthma. The nurse plans to do medication education with the client. What will the best plan of the nurse include? Select all that apply.
   A) Report any changes in urinary pattern.
   B) Use the medication consistently, not occasionally.
   C) The medication may also be used for acute asthma attacks.
   D) Wait 15 minutes before using any other inhaled medications.
   E) Report a change in the color or amount of sputum.

6) The nurse plans to teach an adolescent about inhalation therapy as part of the treatment plan for the client's asthma. What does the best plan of the nurse include?
   A) Inhalation therapy is effective because it goes to the direct site of action in the respiratory tract.
   B) Inhalation therapy is the preferred treatment for adolescents because it is easier for them to manage.
   C) Inhalation therapy is effective because it provides around-the-clock therapy, as opposed to oral medications.
   D) Inhalation therapy is effective because it provides systemic relief of symptoms as well as local relief.

7) The physician has ordered salmeterol (Serevent) for the client with asthma. The client asks the nurse how to use the medication. What is the best response by the nurse?
   A) "Use it frequently because its action is very short."
   B) "Take it 30 to 60 minutes before you exercise."
   C) "Use it when you have an acute asthma attack."
   D) "Take it 5 to 10 minutes before you exercise."

8) The physician has ordered ipratropium (Atrovent) for the client. What is a priority assessment question for the nurse to ask prior to administering this medication?
   A) "Do you have seizures?"
   B) "Have you ever had a heart attack?"
   C) "Do you have glaucoma?"
   D) "Do you have diabetes mellitus?"

9) The client receives albuterol (Proventil) via inhaler. He asks the nurse why he can't just take a pill. What is the best response by the nurse?
   A) Because pills would produce too many side effects; you will have very few side effects with inhaled medications.
   B) "Because this medication cannot be absorbed from your GI tract; the acid in your stomach would destroy it."
   C) "Because the surface of your lungs, and their blood supply, results in a rapid onset of action of the drug when inhaled.
   D) "Because pills cannot help your illness; you must have inhaled medications for relief of symptoms."
10) The client receives beclomethasone (Beconase). What will the best assessment of the nurse include? Select all that apply.
   A) Assess if the client alternates nares with administration of nasal spray.
   B) Assess the client's blood glucose prior to administration of nasal spray.
   C) Assess the client's mouth for any sign of fungal infection.
   D) Assess if the client has blown his nose prior to administration of nasal spray.
   E) Assess the client for any hoarseness or change in voice.

11) The nurse is preparing to administer beclomethasone (Beconase) to several clients. For which client would the nurse hold the drug and contact the physician?
    A) The client who has terminal cancer.
    B) The client who has had a myocardial infarction (MI).
    C) The client who has diabetes mellitus.
    D) The client who has methicillin resistant Staphylococcus aureus (MRSA).

12) The client receives zafirlukast (Accolate) as treatment for asthma. The nurse has completed medication education and evaluates learning has occurred when the client makes which statement?
    A) "This medication dilates my airways so I can breathe better."
    B) "This medication decreases the inflammation in my lungs."
    C) "This medication activates my fight-or-flight response."
    D) "This medication is good when I have an acute attack of asthma."

13) The physician has prescribed cromolyn (Intal) for the client with asthma. The nurse plans to do medication education. What will the best plan of the nurse include?
    A) This medication is indicated for acute asthma attacks.
    B) This medication can affect blood glucose levels.
    C) This medication will help prevent asthma attacks.
    D) This medication can result in hypertension.

14) The client receives ipratropium (Atrovent). She tells the nurse she is going to stop it because of the bitter taste in her mouth after using the medication. What is the best response of the nurse?
    A) "Are you sure you are using the medication properly?"
    B) "That is a good idea; you are experiencing a serious side effect."
    C) "That is a common side effect; it will go away in time."
    D) "You can decrease that side effect by rinsing your mouth after use."

15) The nurse teaches the client about the use of a metered-dose inhaler (MDI). The nurse evaluates that additional teaching is required when the client makes which statement?
    A) "I need to drink a lot of fluids while I am using the metered-dose inhaler (MDI)."
    B) "I need to rinse my mouth each time after using the metered-dose inhaler (MDI)."
    C) "I need to follow the instructions about using the metered-dose inhaler (MDI)."
    D) "I should hear a whistling sound each time I use the metered-dose inhaler (MDI)."
Asthma & Other Pulmonary Disorders

1. Nausea and vomiting are signs of theophylline toxicity; the client needs to come to the clinic for an assessment. A clear liquid diet might help, but the client needs to be assessed for theophylline toxicity. Flu could be the cause of the client’s symptoms, but he needs to be assessed for theophylline toxicity. Food poisoning could be the cause of the client’s symptoms, but he needs to be assessed for theophylline toxicity.

2. During the fight-or-flight response, beta2-adrenergic receptors of the sympathetic nervous system are stimulated, the bronchiolar smooth muscle relaxes, and bronchodilation occurs. Bronchodilators act on the sympathetic nervous system, not the parasympathetic nervous system. Bronchodilators do not decrease the production of mucus. Bronchodilators do not decrease the production of histamine.

3. A side effect of isoproterenol (Isuprel) is hyperglycemia. A creatinine of 1.0 mg/dl is a normal creatinine level, and Isuprel is not nephrotoxic. A sodium of 160 is an elevated sodium level, Isuprel does not cause hypernatremia. An AST of 20 units/L is a normal AST, and Isuprel is not hepatotoxic.

4. Effective treatment of asthma includes long-term treatment to prevent attacks and decrease inflammation, as well as short-term treatment when an attack occurs. Long-term treatment of asthma continues indefinitely, not for just one year. Telling a client that lungs will be severely damaged is nontherapeutic; the inability to prevent an attack in this client is not true. The nurse is able to answer the client’s question; it does not need to be referred to the physician.

5. Anticholinergic drugs can result in urinary retention, and the client should report any changes in urinary patterns. A side effect of anticholinergics is sinusitis and upper respiratory tract infection, so the client should report any changes in the color or amount of sputum. To get the most benefit from ipratropium (Atrovent), it must be used consistently. Anticholinergic drugs will not terminate an acute asthma attack, as peak effects may take 1 to 2 hours. It is only necessary to wait 5 minutes, not 15 minutes, between inhaled medications.
6. The major advantage of aerosol therapy is that it is delivers the drugs to their direct site of action. Inhalation therapy does not provide around-the-clock therapy. Inhalation therapy does not provide systemic relief of symptoms. Inhalation therapy is used for adolescents because it is effective, not because it is easier for them to manage.

7. When taken 30 to 60 minutes prior to physical activity, salmeterol (Serevent) can prevent exercise-induced bronchospasm. Salmeterol has a 12-hour duration of action, not a short duration of action. Salmeterol takes 15-25 minutes to act so it cannot be used to terminate an acute asthma attack. Taking salmeterol 5-10 minutes prior to exercising is not sufficient enough time to prevent an acute attack.

8. Anticholinergic drugs can worsen narrow angle glaucoma. Anticholinergic drugs do not impact glucose levels, so having diabetes mellitus is not a concern. Anticholinergic drugs do not affect seizure disorders, this is not a concern. Anticholinergic drugs do not affect cardiac status; a prior heart attack is not a concern.

9. The respiratory system offers a rapid and efficient mechanism for delivering drugs. The enormous surface area of the bronchioles and the alveoli, and the rich blood supply to these areas, results in an almost instantaneous onset of action for inhaled substances. Albuterol (Proventil) can be given orally, but has a faster onset of action if inhaled. Oral medications are effective with some symptoms of respiratory disorders, but inhaled medications work faster. Inhaled medications also produce side effects.

10. Nares should be alternated with nasal spray. Clients may develop candidiasis do the mouth should be assessed. Clients may experience a change in voice as a local effect. The client should gently blow the nose prior to clear the nasal passages. There is no need to assess the client’s blood glucose.

11. Glucocorticoids can mask the signs of infection, and are contraindicated if active infection is present. Beclomethasone (Beconase) is not contraindicated in clients who have diabetes mellitus. Beconase is not contraindicated in clients who have had a
myocardial infarction. Beconase is not contraindicated in clients who have terminal cancer.

12. Zafirlukast (Accolate) prevents airway edema and inflammation by blocking leukotriene receptors in the airways. Accolate is not a bronchodilator. Accolate is ineffective for acute asthma attacks. Accolate is not a beta-adrenergic drug so it does not activate the sympathetic (fight-or-flight) nervous system.

13. By reducing inflammation, cromolyn, (Intal) is able to prevent asthma attacks. Intal does not affect blood glucose levels. Intal is ineffective for acute asthma attacks. Intal does not cause hypertension.

14. Ipratropium (Atrovent) produces a bitter taste, which may be relieved by rinsing the mouth after use. The client is not experiencing a serious side effect; there is no need to stop the medication. The bitter taste will not go away in time; the client must rinse her mouth. Asking how the client uses the medication may be a good option, but not with the common side effect of bitter taste.

15. A whistling sound indicates that the metered-dose-inhaler (MDI) is not being used effectively and the client is not receiving the medication. Rinsing the mouth after using the MDI is correct; it will help reduce oral absorption of the drug. Fluids are encouraged to liquefy pulmonary secretions when using the MDI. Following instructions indicates compliance with use of the MDI.
Answer Key
Testname: ASTHMA & OTHER PULMON

1) D
2) A
3) A
4) B
5) A, B, E
6) A
7) B
8) C
9) C
10) A, C, D, E
11) D
12) B
13) C
14) D
15) D