**Suggested Answers to Assignments, Chapter 31, The Respiratory System**

| Written Assignments | Learning Objective(s) |
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| Assignment #1. Students complete Chapter 31 of *Lippincott Workbook for Nursing Assistants.* | 1–7 |
| Assignment #2. Students’ essays should include:   * Smoking is the leading cause of COPD * Persons who smoke are 10 times more likely to develop lung cancer, or cancers of the mouth, tongue, and vocal cords * Tobacco smoke is a toxic chemical * Membranes in the lungs become chronically inflamed * Chronic inflammation leads to scarring and possibly cancer * Cilia that line the trachea and bronchi are paralyzed and no longer work to keep the airway and lungs clear of mucus * Smoker’s cough attempts to clear the airways * Thin walls of the alveoli are damaged | 4 |

| Group Assignments | Learning Objective(s) |
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| Assignment #1. Students’ responses could include:   * One of the stages of grief—denial, anger, bargaining, depression, or acceptance * Guilt * Grieving for loss of health * Smoking is physically addictive * Quitting smoking is extremely difficult * Stress from having a chronic or terminal condition makes it hard to quit smoking * Avoid being judgmental | 4 |
| Assignment #2. Students’ responses should include:   1. Pneumonia  * Caused by infection with virus or bacterium * S&S include fever, pain, cyanosis, productive cough * Treated with antibiotics if bacterial  1. Bronchitis  * Caused by virus or bacterium * S&S include nonproductive “barking” cough * Treated with antibiotics if bacterial  1. Influenza  * Caused by the influenza virus * S&S include sore throat, dry cough, stuffy nose, headache, body aches, weakness, and fever * No treatment, only treat the symptoms * Prevention—annual flu shot  1. Asthma  * Allergens cause the bronchi and bronchioles to constrict * S&S include wheezing and difficulty breathing * Acute attacks are treated with inhaled drugs called bronchodilators and steroids  1. Emphysema  * Caused by smoking * S&S include trouble getting a “proper breath,” shallow and rapid breathing, barrel-shaped chest * Treated symptomatically, oxygen  1. Chronic bronchitis  * Caused by long-term irritation of the bronchi and bronchioles by such things as tobacco smoke * S&S include nagging, productive cough, tightness in the chest, difficulty breathing * Treated symptomatically, oxygen  1. Cancer  * Caused by irritants such as smoking, metastasis from other cancers * S&S include a sore in the mouth that does not heal, nagging, or persistent cough or hoarseness * Treated with surgery, chemotherapy, radiation  1. Pneumothorax  * Caused by chest trauma; air enters the chest cavity * S&S include chest wound, difficulty breathing * Treated by insertion of chest tube  1. Hemothorax  * Caused by chest trauma, or a rupture in the lung tissue; blood builds up in the chest cavity * S&S include difficulty breathing * Treated with surgery if necessary to stop the bleeding, and insertion of chest tube | 4, 5 |

| Clinical Assignments | Learning Objective(s) |
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| Assignment #1. Students should observe for normal respiratory patterns in the patients and residents they are caring for, and report any of the following observations immediately to the nurse and the instructor:   * A person experiences the sudden onset of chest pain or difficulty breathing * A person develops noisy breathing * A person begins to make fluid-like, gurgling sounds * The oxygen flow rate on the oxygen flow meter does not match the ordered amount of oxygen * The gauge on a pressurized oxygen tank indicates that the oxygen level is low * The screen on a pulse oximeter shows a reading of less than 90% * A person’s skin has a blue or gray tinge, either at rest or while exercising * A person coughs up sputum that is discolored | 6, 7 |
| Assignment #2. Request the respiratory therapist in the clinical area to speak to the class and include:   * Drugs such as oxygen * Mechanical ventilation * Postural drainage * Nebulizers * Humidifiers * Oxygen delivery systems * Pulse oximeter * Observations of equipment should include:   + Check the humidifier bottle for bubbles and water level   + Make certain oxygen tubing is free of kinks   + Make sure the oxygen flow rate matches the ordered flow rate   + Make sure endotracheal and tracheostomy tubing stays connected at all times | 5, 6, 7 |

| Web Assignment | Learning Objective(s) |
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| Assignment #1. Students can access information by entering “influenza viruses” to find web site such as:  <http://www.cdc.gov/flu/about/viruses>  Types of viruses students can find include:   * Influenza A * H1N1 (Swine) * H3N2 * Influenza B | 4 |