AUTOMATION IN THE CLINICAL CHEMISTRY LABORATORY

Assignment:

1. Read the objectives located below to familiarize yourself to the reading assignment. Use the objectives to focus your study.

2. Read pages 166-183 in the textbook: Bishop, Clinical Chemistry, 6th edition. While reading, complete questions 1-19 found on page 2-7 of this handout.

NEW OBJECTIVES for CLS 415:

Objectives: Upon completion of this unit of CLS 415, the Clinical Laboratory Science student will be able to:

1. Define the following terms related to automation in the clinical laboratory:
   a. Automation  e. Random access
   b. Continuous flow  f. Flag
   c. Centrifugal analysis  g. Dwell time
   d. Discrete analysis  h. Throughput

2. List four driving forces behind the development of automated analyzers.

3. Name three basic approaches to sample analysis by automated analyzers.

4. Explain the major steps in automated analysis.

5. Explain the concept of total laboratory automation.

6. Differentiate the three phases of laboratory testing process, as related to automation:
   a. Pre-analytical
   b. Analytical
   c. Post-analytical