

Surgical Technologist

Study Guide

Assessment:

8621 Surgical Technologist

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Overview

This study guide is designed to help students prepare for the Surgical Technologist assessment. It not only includes information about the assessment, but also the skills standards upon which the assessment is based and test taking strategies. The assessment measures a student's ability to apply knowledge of the skills necessary for success in the surgical technology field.

Each of the four sections in this guide provides useful information for students preparing the Surgical Technologist assessment.

- CareerTech and Competency-Based Education: A Winning Combination
- Surgical Technology assessment
 - ▶ Assessment Information
 - ▶ Standards and Test Content
 - ▶ Sample Questions
 - ▶ Abbreviations, Symbols, and Acronyms
- Strategies for Test Taking Success
- Notes

The standards for this assessment are aligned with those of the Association of Surgical Technologists (AST). The AST was established in 1969 with the mission of ensuring quality patient care. AST actively promotes education for the profession; legislatively advocates for practitioner recognition; supports state-level constituent organizations; and has committed to students as the future of the profession. As the oldest and most widely recognized professional organizations for surgical technologists, AST's primary purpose is to ensure that surgical technologists possess the knowledge and skill sets to administer the highest quality of care for every patient.

For more information about the AST, go to: www.ast.org

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CareerTech and Competency-Based Education: A Winning Combination

Competency-based education uses learning outcomes that emphasize both the application and creation of knowledge and the mastery of skills critical for success. In a competency-based education system, students advance upon mastery of competencies, which are measurable, transferable outcomes that empower students.

Career and technology education uses industry professionals and certification standards to identify the knowledge and skills needed to master an occupation. This input provides the foundation for development of curriculum, assessments and other instructional materials needed to prepare students for wealth-generating occupations and produce comprehensively trained, highly skilled employees demanded by the work force.

Tools for Success

CareerTech education relies on three basic instructional components to deliver competency-based instruction: skills standards, curriculum materials, and competency assessments.

Skills standards provide the foundation for competency-based instruction and outline the knowledge and skills that must be mastered in order to perform related jobs within an industry. Skills standards are aligned with national skills standards and/or industry certification requirements; therefore, a student trained to the skills standards is equally employable in local, state and national job markets.

Curriculum materials and textbooks contain information and activities that teach students the knowledge and skills outlined in the skills standards. In addition to complementing classroom instruction, curriculum resources include supplemental activities that enhance learning by providing opportunities to apply knowledge and demonstrate skills.

Certification Assessments test the student over material outlined in the skills standards and taught using the curriculum materials and textbooks. When used with classroom performance evaluations, certification assessments provide a means of measuring occupational readiness.

Each of these components satisfies a unique purpose in competency-based education and reinforces the knowledge and skills students need to gain employment and succeed on the job.

Measuring Success

Evaluation is an important component of competency-based education. Pre-training assessments measure the student's existing knowledge prior to receiving instruction and ensure the student's training builds upon this knowledge base. Formative assessments administered throughout the training process provide a means of continuously monitoring the student's progress towards mastery.

Certification assessments provide a means of evaluating the student's mastery of knowledge and skills. Coaching reports communicate assessment scores to students and provide a breakdown of assessment results by standard area. The coaching report also shows how well the student has mastered skills needed to perform major job functions and identifies areas of job responsibility that may require additional instruction and/or training.

Surgical Technologist Assessment Information

What is the Surgical Technologist assessment?

The Surgical Technologist assessment is an end-of-program assessment for students in Surgical Technology programs. The assessment provides an indication of student mastery of knowledge and concepts necessary for success in careers in this area.

How was the assessment developed?

The assessment was developed by the CareerTech Testing Center. The assessment and standards align with those of the Association of Surgical Technologists. Items were developed and reviewed by a committee of subject matter experts.

What does the assessment cover?

Specifically, the test includes multiple-choice test items over the following areas:

Surgical Technologist (90 questions)

Perioperative Patient Care	26%
Intra and Postoperative Procedures	44%
Ancillary Functions	1%
Basic Science	29%

What are the benefits of using this assessment?

Students receive a certificate for each assessment that he/she passes. This certificate may be included in his/her portfolio and used to communicate the student's mastery of the subject matter to potential employers.

When should the assessment be taken?

The CareerTech Testing Center recommends that students take the assessments as soon as possible after receiving all standards-related instruction, rather than waiting until the end of the school year.

Are the assessments timed?


No. However, most students finish the assessment within one hour.

What resources can students use on these assessments?

Students are allowed to use calculators and scratch paper on CTTC assessments; however, these items must be provided by the testing proctor and returned to the proctor before the student's exam is submitted for scoring. Calculator apps on cell phones and other devices may not be used on these assessments.

What accommodations can be made for students with Individualized Education Plans (IEPs)?

Accommodations are allowed for students with an Individualized Education Plan. Examples of allowable accommodations include:

- Extended time — This assessment is not timed; therefore, students may take as much time as needed to finish. The assessment must be completed in one testing session.
- Readers — A reader may be used to read the assessment to a student who has been identified as needing this accommodation.
- Enlarged text — Students needing this accommodation can activate this feature by clicking the  icon in the upper right corner of the screen.

What can students expect on Test Day?

All CTTC assessments are web-based and delivered exclusively by a proctor in the school's assessment center. The proctor **cannot** be an instructor or anyone who was involved with the student during instruction.

Assessments are delivered in a question-by-question format. When a question is presented, the student can select a response or leave the question unanswered and advance to the next question. Students may also flag questions to revisit before the test is scored. All questions must be answered before the test can be submitted for scoring.

After the assessment is scored, the student will receive a score report that not only shows the student's score on the assessment, but also how the student performed in each standard area.

Can students retake the test?

Students may retake the test unless their school or state testing policies prohibit retesting. Students who can retest must wait at least three days between test attempts.



Standards and Test Content

Surgical Technologist

Perioperative Patient Care (22 questions)

1. Fundamentals of diagnostic results (e.g., normal ranges of lab results, basic orientation of X-rays, abnormalities of results)
2. Patient transfer principles and modes of transportation
3. Fundamentals of urinary catheterization techniques
4. Patient positioning principles
5. Draping principles and materials
6. Skin preparation principles
7. Legal and ethical aspects of surgery
8. Surgical conscience
9. Patient needs
10. Preoperative documentation
11. Surgical scrub principles
12. Donning sterile gown and gloves
13. Operating room physical environment
14. Personal protective equipment and attire
15. Principles and methods of opening sterile supplies

Intra and Postoperative Procedures (37 questions)

1. Patient emergency and safety procedures
2. Fundamentals of patient monitoring techniques
3. Instrument classification, functions, and usability
4. Methods of operative exposure
5. Methods of hemostasis
6. Stapling and suturing materials and techniques
7. Thermal surgical techniques and safety
8. Radiologic surgical techniques and safety
9. Laparoscopic surgical techniques and safety
10. Ultrasonic surgical techniques and safety
11. Standard Precautions and exposure(s) protocol
12. Safety and environmental hazards
13. Types and uses of supplies



14. Surgical implants
15. Types of surgical equipment
16. Surgical procedures and sequences
17. Care and handling of specimen(s)
18. Handling procedures for blood and waste products
19. Counting procedures
20. Postoperative clean up procedures

Ancillary Functions (5 questions)

1. Inventory of supplies and equipment
2. Apply Standard Precautions to all job tasks
3. Apply OSHA and CDC guidelines
4. Demonstrate use of MSDS sheets
5. Apply principles of accident prevention
 - Incident reports
6. Participate in disaster drills
7. Identify appropriate precautions for various job tasks
 - Invasive vs. non-invasive items

Basic Science (26 questions)

1. Medical terminology and abbreviations
2. Anatomy and physiology
3. Surgical pathology
4. Biology and microbiology
5. Stages of wound healing
6. Surgical wound classification
7. Factors influencing wound healing
8. Principles of tissue handling
9. Infection control procedures
10. Blood and fluid replacement
11. Weights and measures
12. Types, uses, actions, and interactions of drugs and solutions
13. Methods of anesthesia administration
14. Anesthesia-related agents and medications
15. Complications from drug interactions



Sample Questions

- _____ 1. Which of the following catheters is non-retaining?
- Coude
 - Red Robinson
 - Malecot
 - Pezzer
- _____ 2. The primary responsibility of the surgical technologist during cardiopulmonary resuscitation is to:
- bring the resuscitation cart to the room.
 - document all medications given to the patient.
 - protect the sterile field and assist when needed.
 - start the time clock.
- _____ 3. Yankauer or Tonsil refers to a:
- hemostat.
 - retractor.
 - needle holder.
 - suction tip.
- _____ 4. Which method of hemostasis uses a suture strand attached to a needle to tie off blood vessels?
- clamp
 - clip
 - free-tie
 - stick-tie
- _____ 5. What must be used during a diagnostic laparoscopy?
- electrosurgical unit
 - irrigation
 - light source
 - nitrous oxide
- _____ 6. Which scope is used to view internal and abdominal structures during minimally-invasive procedures?
- hysteroscope
 - laparoscope
 - arthroscope
 - cystoscope

- _____ 7. Where are sequential compression devices applied?
- a. hands
 - b. lower extremities
 - c. neck
 - d. upper extremities
- _____ 8. What type of incision is most commonly used for Cesarean sections?
- a. midline
 - b. McBurney
 - c. paramedian
 - d. Pfannestiel
- _____ 9. Milking an instrument is part of which surgical supply preparation phase?
- a. assembly and packaging
 - b. maintenance
 - c. storage
 - d. terminal cleaning
- _____ 10. Which term describes abnormal heart sounds?
- a. rhonchi
 - b. arrhythmia
 - c. rales
 - d. murmur



Sample Questions — Key

1. Which of the following catheters is non-retaining?
 - a. Coude Incorrect
 - b. Red Robinson Correct
 - c. Malecot Incorrect
 - d. Pezzer Incorrect

2. The primary responsibility of the surgical technologist during cardiopulmonary resuscitation is to:
 - a. bring the resuscitation cart to the room. Incorrect
 - b. document all medications given to the patient. Incorrect
 - c. protect the sterile field and assist when needed. Correct
 - d. start the time clock. Incorrect

3. Yankauer or Tonsil refers to a:
 - a. hemostat. Incorrect
 - b. retractor. Incorrect
 - c. needle holder. Incorrect
 - d. suction tip. Correct

4. Which method of hemostasis uses a suture strand attached to a needle to tie off blood vessels?
 - a. clamp Incorrect
 - b. clip Incorrect
 - c. free-tie Incorrect
 - d. stick-tie Correct

5. What must be used during a diagnostic laparoscopy?
 - a. electrosurgical unit Incorrect
 - b. irrigation Incorrect
 - c. light source Correct
 - d. nitrous oxide Incorrect

6. Which scope is used to view internal and abdominal structures during minimally-invasive procedures?
 - a. hysteroscope Incorrect
 - b. laparoscope Correct
 - c. arthroscope Incorrect
 - d. cystoscope Incorrect

7. Where are sequential compression devices applied?

- a. hands Incorrect
- b. lower extremities Correct
- c. neck Incorrect
- d. upper extremities Incorrect

8. What type of incision is most commonly used for Cesarean sections?

- a. midline Incorrect
- b. McBurney Incorrect
- c. paramedian Incorrect
- d. Pfannestiel Correct

9. Milking an instrument is part of which surgical supply preparation phase?

- a. assembly and packaging Incorrect
- b. maintenance Correct
- c. storage Incorrect
- d. terminal cleaning Incorrect

10. Which term describes abnormal heart sounds?

- a. rhonchi Incorrect
- b. arrhythmia Incorrect
- c. rales Incorrect
- d. murmur Correct

Abbreviations, Symbols and Acronyms

The following is a list of abbreviations, symbols, and acronyms used in the Surgical Technologist study guide and on the Surgical Technologist assessment:

"	Inch
#	Number
%	Percent
AESOP	Automated Endoscopic System for Optimal Positioning
AST	Association of Surgical Technologists
CDC	Center for Disease Control and Prevention
CUSA	Cavitron Ultrasonic Surgical Aspirator
IEP	Individualized Education Plans
LEEP	Loop electrosurgical excision procedure
MSDS	Material Safety Data Sheets
NaCl	Sodium chloride
OR	Operating Room
OSHA	Occupational Safety and Health Administration
PACU	Post-anesthesia care unit
X-ray	X radiation

Test Taking Strategies

This section of the study guide contains valuable information for testing success and provides a common-sense approach for preparing for and performing well on any test.

General Testing Advice

1. Get a good night's rest the night before the test — eight hours of sleep is recommended.
2. Avoid junk food and “eat right” several days before the test.
3. Do not drink a lot or eat a large meal prior to testing.
4. Be confident in your knowledge and skills!
5. Relax and try to ignore distractions during the test.
6. Focus on the task at hand — taking the test and doing your best!
7. Listen carefully to the instructions provided by the exam proctor. If the instructions are not clear, ask for clarification.

Testing Tips

1. Read the entire question before attempting to answer it.
2. Try to answer the question before reading the choices. Then, read the choices to determine if one matches, or is similar, to your answer.
3. Do not change your answer unless you misread the question or are certain that your first answer is incorrect.
4. Answer questions you know first, so you can spend additional time on the more difficult questions.
5. Check to make sure you have answered every question before you submit the assessment for scoring — unanswered questions are marked incorrect.



