

Section Three

(CST) Examination

III. BASIC SCIENCE (29%)

A. Anatomy and Physiology (17%)

1. Use appropriate medical terminology and abbreviations.
2. Demonstrate knowledge of the following anatomical systems as they relate to the surgical procedure:
 - a) cardiovascular
 - b) digestive
 - c) endocrine
 - d) integumentary
 - e) lymphatic
 - f) muscular
 - g) nervous
 - h) peripheral vascular
 - i) reproductive
 - j) respiratory
 - k) sensory
 - l) skeletal
 - m) urinary
3. Demonstrate knowledge of human physiology as it relates to the surgical procedure for the following systems:
 - a) cardiovascular
 - b) digestive
 - c) endocrine
 - d) integumentary
 - e) lymphatic
 - f) muscular
 - g) nervous
 - h) peripheral vascular
 - i) reproductive
 - j) respiratory
 - k) sensory
 - l) skeletal
 - m) urinary
4. Identify the following surgical pathologies:
 - a) abnormal anatomy
 - b) disease processes
 - c) fractures
 - d) malignancies

B. Microbiology (6%)

1. Apply the following principles of surgical microbiology to operative practice:
 - a) classification and pathogenesis of microorganisms
 - b) factors influencing wound healing (e.g., condition of patient, wound type)
 - c) infection control procedures (e.g., aseptic technique)
 - d) principles of tissue handling (e.g., Halsted principles, tissue manipulation methods, traction/counter traction)
 - e) stages of, and factors influencing wound healing
 - f) surgical wound classification
2. Identify and address factors that can influence an infectious process.

C. Surgical Pharmacology (6%)

1. Apply the following principles of surgical pharmacology to operative practice:
 - a) anesthesia related agents and medications
 - b) blood and fluid replacement
 - c) complications from drug interactions (e.g., malignant hyperthermia)
 - d) methods of anesthesia administration (e.g., general, local, block)
 - e) types, uses, action, and interactions of drugs and solution (e.g., hemostatic agents, antibiotics, IV solutions)
 - f) weights, measures, and conversions

CST EXAMINATION RECOMMENDED REFERENCES

The most current editions of the books listed below are used for reference by the NBSTSA and the CST-ERC.

REFERENCE

Alexander's Care of the Patient in Surgery
Berry and Kohn's Operating Room Technique
Human Physiology
Instrumentation for the Operating Room
Medical Terminology Systems: A Body Systems Approach
Microbiology for the Health Sciences
Physician's Desk Reference
Principles of Human Anatomy
Surgical Instruments-A Pocket Guide
Surgical Technology Principles and Practice
Taber's Cyclopedic Medical Dictionary
The Human Body in Health and Disease
Surgical Technology for the Surgical Technologist
Standards Recommended Practices and Guidelines
The Merck Manual
Grays Anatomy: The Anatomical Basis of Clinical Practice
Law & Ethics for Medical Careers
Pharmacology for the Surgical Technologist
Microbiology for the Surgical Technologist
Memmler and Wood The Human Body in Health and Disease
American Heart Association-Cardiopulmonary Resuscitation
American Heart Association Health Care Provider CPR text

AUTHOR

Rothrock
Phillips
Rhoades and Pflanzner
Tighe
Guylys & Wedding
Burton & Engelkirk
Thomson PDR
Tortora
Well & Bradley
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Venes
Thibodeau & Patton
Price & Frey
AORN
Beers & Berkow
Strandring
Judson, Harrison & Hicks
Keegan & Snyder
Price & Frey
Lippincott