Microbiology for Surgical Technologists 2nd edition Rodriguez Solutions Manual

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Microbiology for Surgical Technologists, 2nd Edition; Rodriguez

"Under the Microscope" Case study questions and answers

Author Note to Instructors:

The end-of-chapter "Under the Microscope" case study scenarios and questions are designed to be critical thinking exercises which may require some degree of additional explanation of topics as would likely be covered by instructors during lectures. Instructors may also explain to students that additional internet research may be used to help answer some questions if answers are not obvious from chapter reading materials.

The author recognizes the variability of instructional design and preferences and that this course may be taught at various points in the surgical technology student's education (prior to or in tandem with core surgical technology classes and clinical training). Therefore, topics directly relating to surgical technology students and the practices, roles and responsibilities within the profession may be new to some, requiring additional information, while a reinforcement and review of previously covered material for others.

Chapter 1: Introduction to Microbiology

1. What is an example of a routine procedure performed by surgical technologists prior to entering the sterile field that would be part of the aseptic technique?

ANSWER: The surgical hand scrub or skin rub is an example of an aseptic procedure and not a sterile technique because living human skin cannot be sterilized. The procedure renders the hands and arms "surgically clean" by removing transient microorganisms and reducing the resident (indigenous) microbial populations to an irreducible minimum by mechanical friction and chemical suppression.

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WHERE FOUND: Discussion of this topic in this or other surgical technology classes; Figure 1-9 on page 14; key terms and definition on page 16.

2. List components of personal protective equipment (PPE) that serve as barrier protection for patients and personnel.

ANSWER: Sterile and unsterile gloves, sterile and unsterile cover gowns, face masks, N-95 type respirator masks, shoe covers, hats/caps/head covers, goggles or face shields, and impervious aprons.

WHERE FOUND: Under H1/Breaking the Chain of Disease Transmission; Figure 1-1 on page 3 and Figure 1-10 on page 15; key terms and definitions on page 17

3. Which vaccinations are required for personnel in the operating room and why?

ANSWER: Hepatitis B and seasonal influenza at the minimum. Serum titers may be required to prove current immunity status for measles, mumps, rubella (MMR) and tetanus, diphtheria, and pertussis (Tdap). Patients in healthcare settings may be immunocompromised and infants, children, and the elderly may be at elevated risk from not having adequate vaccination protection.

WHERE FOUND: Discussion of this topic in this or other surgical technology classes; Figure 1-9 on page 14

4. Which historical figures in medicine are credited with recognizing the need for aseptic techniques to reduce wound infections?

ANSWER: Fracastoro, Semmelweis, and Lister.

WHERE FOUND: Under H1/Early Pioneers of Microbiology; H1/ The Golden Age of Microbiology

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5. Which set of measures are used in addition to Standard Precautions when the disease status of a surgical patient has been determined in advance?

ANSWER: Transmission based precautions: contact (direct and indirect); airborne; and droplet.

WHERE FOUND: Under H1/Breaking the Chain of Disease Transmission; Figure 1-9 on page 14

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