Fundamentals of Nursing

CREDIT HOURS
8

LEVEL
LOWER

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Before You Choose This UExcel Exam

Uses for the Examination

- Excelsior College, the test developer, recommends granting eight (8) semester hours of lower-level undergraduate credit to students who receive a letter grade of C or higher on this examination.
- Other colleges and universities also recognize this exam as a basis for granting credit or advanced standing.
- Individual institutions set their own policies for the amount of credit awarded and the minimum acceptable score.

Examinees who have applied to Excelsior College should ask their academic advisor where this exam fits within their degree program.

Examinees not enrolled in an Excelsior College degree program should check with the institution from which they wish to receive credit to determine whether credit will be granted and/or to find out the minimum grade required for credit. Those who intend to enroll at Excelsior College should ask an admissions counselor where this exam fits within their intended degree program.

For more information on exam availability and actual testing information, see the Exam Registration and Information Guide.

Examination Length and Scoring

This examination consists of 150 multiple choice and other type questions. You will have three (3) hours to complete the exam. Your score will be reported as a letter grade. Questions are scored either correct (1) or incorrect (0). There is no partial credit. Each credit-bearing exam contains pretest questions, which are embedded throughout the exam. They are indistinguishable from the scored questions. It is to your advantage to do your best on all the questions. Pretest questions are being tried out for use in future versions of the exam.

The UExcel exams do not have a fixed grading scale such as A = 90–100%, B = 80–90%, and so forth, as you might have seen on some exams in college courses. Each UExcel test has a scale that is set by a faculty committee and is different for each exam. The process, called standard setting, is described in more detail in the Technical Handbook. Excelsior puts each exam through a standard setting because different test questions have different levels of difficulty. To explain further, getting 70% of the questions right on the exam when the questions are easy does not show the same level of proficiency as getting 70% of questions correct when the questions are hard. Every form of a test (a form contains the test questions) has its own specific grading scale tailored to the particular questions on each exam form.

Please also note that on each form, some of the questions (referred to as pretest questions) count toward the score and some do not; the grading scale applies only to those questions that count toward the score. The area with percentage ratings on the second page of your score report is intended to help identify relative strengths and weaknesses and which content areas to emphasize, should you decide to take the examination again. Your grade
is **based on only the scored questions**. Therefore, the percentage ratings do not necessarily reflect the total percentage that counted toward your grade.

For the best view of the types of questions on this exam, see the sample questions in the back of this guide. Practice, practice, practice!

**Score Reporting**

For most of our examinations, based on performance, an examinee is awarded a letter grade of A, B, C, or F. A letter grade of D can be given, but credit is awarded for A, B, and C letter grades only. The letter grades reported to examinees indicate that their performance was equivalent to the performance of students who received the same letter grade in a comparable, on-campus course.

More specifically, the letter grade indicates the examinee’s proficiency relative to the learning outcomes specified in the exam content guide. Following are general descriptions of examinee performance at each level:

**Letter Grade Description**

- **A** Highly Competent: Examinee’s performance demonstrates an advanced level of knowledge and skill relative to the learning outcomes.
- **B** Competent: Examinee’s performance demonstrates a good level of knowledge and skill relative to the learning outcomes.
- **C** Marginally Competent: Examinee’s performance demonstrates a satisfactory level of knowledge and skill relative to the learning outcomes.
- **D** Not Competent (no credit recommended): Examinee’s performance demonstrates weak knowledge of the content and minimal skill relative to the learning outcomes.\(^1\)
- **F** Fail (no credit recommended): Examinee’s performance demonstrates no knowledge of the content and no skill in the subject relative to the learning outcomes.

Credit is transcripted by Excelsior College for examinees who achieve letter grades of C or higher.

We encourage colleges and universities to use the Excelsior College letter grades of A, B, and C as acceptable standards for awarding credit.

See page 35, at the back of this content guide, for a sample UExcel Grade Report for Examinations.

**Excelsior College Bookstore**

The Excelsior College Bookstore offers recommended textbooks and other resources to help you prepare for UExcel exams.

The bookstore is available online at (login required): [www.excelsior.edu/bookstore](http://www.excelsior.edu/bookstore)

**Excelsior College Library**

Library services are available to students enrolled in a degree program at Excelsior College. Created through our partnership with the Sheridan Libraries of The Johns Hopkins University, the library provides access to journal articles, books, websites, databases, reference services, and many other resources. To access the Excelsior College Library, visit [www.excelsior.edu/library](http://www.excelsior.edu/library) (login is required). Access to the library is available 24/7.

**Take Charge of Your Own Learning**

At Excelsior College, independent, self-directed study supported by resources we help you find is not a new concept. We have always stressed to students who take exams that they are acting as their own teacher, and that they should spend as much time studying for an exam as they would spend in a classroom and on homework for a corresponding college course in the same subject area.

Begin by studying the content outline contained in this content guide, at its most detailed level. You will see exactly which topics are covered, and where chapters on those topics can be found in the Recommended Resources. You will see exactly where you might need to augment your knowledge or change your approach.

The content outline, along with the learning outcomes for this exam and recommended textbooks, will serve as your primary resources.

**How Long Will It Take Me to Study?**

Study for a UExcel exam is comparable to an equivalent college-level course. As an independent
learner, you should study and review as much as you would for the same subject in a campus-based college course. If you already have a background in the subject, you may be able to pass the exam successfully with fewer hours of study. It depends upon the learner as well as the subject, the number of credits (for example, a 6- or 8-credit exam will require more hours of study than a 3-credit exam), and the length of the exam. We strongly encourage you to create a long-term action or study plan, so that you have a systematic approach to prepare for the exam. We've included guidelines for creating such a plan.

How Can I Create an Effective Long-Term Study Plan?

1. **Determine the time you will require to complete your preparation for this exam.** If you have not studied the subject before, you should plan to budget approximately 45 hours of study time for every credit: 135 hours for 3 credits, 180 hours for 4 credits, 270 hours for 6 credits, and 360 hours for 8 credits. These hours are rules of thumb based on expectations for a student taking a course in the subject; it may take you more or less time, depending on how familiar you are with the material and how easily you absorb the information studying on your own. Aside from the content review, you should then factor in time to search for and use other resources, and to complete any projects and assignments in the study materials that will clarify your understanding of the topics in the content outline (that part in the content guide where the specific areas of study are spelled out). Spend more time on concepts and areas in which you feel you are weak. Totaled, this is approximately the amount of time you should expect to devote to a three-credit, campus-based course. The actual amount of time you require depends on many factors, and will be approximate. If your background is weak, you may need to set aside substantially more than 135–150 hours. If your background is strong, you may budget less time.

   Take a few minutes to review the content outline to assess your familiarity with the content. Then, in the space below, write the number of hours you will allocate to complete preparing for the exam.

   Hours Required =

2. **Determine the time you will have available for study.**

   In self-study, you need structure, as well as motivation and persistence, and a methodical approach to preparation. There is no set class to keep you on task. You have to do that yourself. Construct a time-use chart to record your daily activities over a one-week period. The most accurate way to do this is to complete the chart on a daily basis to record the actual amount of time you spend eating, sleeping, commuting, working, watching television, caring for others and yourself, reading, and everything else in an adult’s life. However, if your schedule is regular, you might prefer to complete the chart in one sitting and, perhaps, by consulting your appointment book or planner.

   After you have recorded your activities, you will be ready to schedule study periods around these activities or, perhaps, instead of some of them. In the space below, write the number of hours you will be able to set aside for study each week.

   Hours Required =

3. **Divide the first number by the second number.**

   This will give you the number of weeks you will need to set aside for independent study. For example, if you think you will require 170 hours of study and you have 10 hours available to study each week, divide 170 hours by 10 hours and you will get 17. This means that you will need about 17 weeks to complete this course of study. However, you will also need to allow about a week for review and self-testing. Moreover, to be on the safe side, you should also add two weeks to allow for unforeseen obstacles and times when you know you will not be able to study (e.g., during family illnesses or holidays). So, in this case, you should allot a total of 18 to 19 weeks to complete your study.

4. **Schedule your examination to coincide with the end of your study period.**

   For example, if you plan to allow 18 weeks for study, identify a suitable examination date and begin study at least 18 weeks before that date. (The date you begin study assumes that you will have received all of your study materials, particularly textbooks, by that time.)
5. Format a long-term study plan.

You will need to use a calendar, planner, or some other tool to format and track your long-term study plan. Choose a method that is convenient and one that keeps you aware of your study habits on a daily basis. Identify the days and exact hours of each day that you will reserve for study throughout your whole independent study period. Check to see that the total number of hours you designate for study on your long-term study plan adds up to the number of hours you have determined you will need to complete this course of study (Step 1).

6. Record in your long-term study plan the content you plan to cover during each study period.

Enter the session numbers, review, and examination preparation activities you will complete during each study period. While it is suggested that approximately 160–170 hours of study is required for this exam, each and every student may require different timelines based on their comfort with, and comprehension of, the material.

You now have a tentative personal long-term study plan. Keep in mind that you will have to adjust your study plan, perhaps several times, as you study. It is only by actually beginning to work systematically through the material, using the content outline, that you will be able to determine accurately how long you should allow for each unit.

What Learning Strategy Should I Use?

The following guidelines are intended to help you acquire the grounding in the knowledge and skills required for successful completion of this examination.

1. Approach learning with a positive attitude.

Most students are capable of learning subject content if they devote enough time and effort to the task. This devotion will give you a positive edge and a feeling of control.

2. Diligently complete the exact work you specified in your study plan.

Your study plan is being designed for the specific purpose of helping you achieve the learning outcomes for this exam.

3. Be an active learner.

You should actively engage in the learning process. Read critically, take notes, and continuously monitor your comprehension. Keep a written record of your progress, highlight content you find difficult to grasp, and seek assistance from someone in your learning community who can help you if you have difficulty understanding a concept.

4. Be patient: you may not understand everything immediately.

When encountering difficulty with new material, be patient with yourself and don't give up. Understanding will come with time and further study. Sometimes you may need to take a break and come back to difficult material. This is especially true for any primary source material (original letters, documents, and so forth) that you may be asked to read. The content outline will guide you through the material and help you focus on key points. You will find that many concepts introduced in earlier sessions will be explained in more detail in later sessions.

5. Apply your learning to your daily life.

Use insights you gain from your study to better understand the world in which you live. Apply the learning whenever you can. Look for instances that support or contradict your reading on the subject.

6. Accommodate your preferred way of learning.

How do you learn best? Common ways to learn are reading, taking notes and making diagrams, and by listening to someone (on video or live). Others learn by doing. Do any of these descriptions apply to you? Or does your learning style vary with the learning situation? Decide what works for you and try to create a learning environment to accommodate your preferences.

Study Tips

Become an active user of the resource materials. Aim for understanding rather than memorization. The more active you are when you study, the more likely you will be to retain, understand, and apply the information.

The following techniques are generally considered to be active learning:

- **preview or survey** each chapter
• highlight or underline text you believe is important
• write questions or comments in the margins
• practice re-stating content in your own words
• relate what you are reading to the chapter title, section headings, and other organizing elements of the textbook
• find ways to engage your eyes, your ears, and your muscles, as well as your brain, in your studies
• study with a partner or a small group
• prepare your review notes as flashcards or create recordings that you can use while commuting or exercising

When you feel confident that you understand a content area, review what you have learned. Take a second look at the material to evaluate your understanding. If you have a study partner, the two of you can review by explaining the content to each other or writing test questions for each other to answer. Review questions from textbook chapters may be helpful for partner or individual study, as well.

Study smart for your UExcel exam! Success starts with establishing a relationship with your advisor.

About Test Preparation Services
Preparation for UExcel® exams and Excelsior College® Examinations, though based on independent study, is supported by Excelsior College with a comprehensive set of exam learning resources and services designed to help you succeed. These learning resources are prepared by Excelsior College so you can be assured that they are current and cover the content you are expected to master for the exams. These resources, and your desire to learn, are usually all that you will need to succeed.

There are test-preparation companies that will offer to help you study for our examinations. Some may imply a relationship with Excelsior College and/or make claims that their products and services are all that you need to prepare for our examinations.

Excelsior College does not endorse the products and services of any tutorial or test preparation firm. We do not review the materials provided by these firms for the content or compatibility of their material and resources with UExcel® exams or Excelsior College Examinations®. No test preparation vendor is authorized to provide admissions counseling or academic advising services, or to collect any payments, on behalf of Excelsior College. Excelsior College does not send authorized representatives to a student's home nor does it review the materials provided by test preparation companies for content or compatibility with Excelsior College examinations.

To help you become a well-informed consumer, we suggest that before you make any purchase decision regarding study materials provided by organizations other than Excelsior College, you consider the points outlined on our website at www.excelsior.edu/testprep.

Exam Preparation Strategies
Each learner is different. However, all learners should read the content outline in the exam’s Content Guide and ensure that they have mastered the concepts. For someone with no prior knowledge of the subject, a rule of thumb is 135 hours of study for a 3-credit exam—this number is just to give you an idea of the level of effort you will need, more or less.

Content Guides
This content guide is the most important resource. It lists the outcomes, a detailed content outline of what is covered, and textbooks and other study resources. It also has sample questions and suggestions for how to study. Content guides are updated periodically to correspond with changes in particular examinations and in textbook editions. Examinees can download any of the latest free UExcel content guides by visiting the individual exam page or from the list at www.excelsior.edu/contentguides.

Using the Content Outline
Each content area in the content outline includes the most important sections of the recommended resources for that area. These annotations are not intended to be comprehensive. You may need to refer to other chapters in the recommended textbooks. Chapter numbers and titles may differ among textbook editions.

This content outline contains examples of the types of information you should study. Although these examples are many, do not assume that everything on the exam will come from these examples. Conversely, do not expect that every detail you study will appear
on the exam. Any exam is only a broad sample of all the questions that could be asked about the subject matter.

**Using the Sample Questions and Rationales**

Each content guide provides sample questions to illustrate those typically found on the exam. These questions are intended to give you an idea of the level of knowledge expected and the way questions are typically phrased. The sample questions do not sample the entire content of the exam and are not intended to serve as an entire practice test.

**Recommended Resources for the UExcel Exam in Fundamentals of Nursing**

The resources listed below were selected by the faculty members on the examination committee for use in developing this exam.

Resources listed under “Strongly Recommended” were used by the committee to verify all the questions on the exam. Please refer to the Content Outline to see which parts of the exam are cross-referenced to these resources.

Resources listed under “Optional” provide additional material that may deepen or broaden your understanding of the subject, or that may provide an additional perspective on the exam content. Textbook resources, both Strongly Recommended and Optional, may be purchased from the Excelsior College bookstore at [www.excelsior.edu/bookstore](http://www.excelsior.edu/bookstore).

You should allow ample time to obtain the necessary resources and to study sufficiently before taking the exam, so plan appropriately, with an eye towards your own personal learning needs. See the sections in this guide on the Excelsior College Bookstore and the Excelsior College Library, and under Reducing Textbook Costs, to help you secure the Strongly Recommended resources successfully.

**Textbook Editions**

Textbook editions listed in the UExcel content guides may not be the same as those listed in the bookstore. Textbook editions may not exactly match up in terms of table of contents and organization, depending upon the edition. However, our team of exam developers checks exam content against every new textbook edition to verify that all subject areas tested in the exam are still adequately available in the study materials. If needed, exam developers will list additional Strongly Recommended resources to ensure that all topics in the exam are still sufficiently covered. Public libraries may have the textbooks you need, or may be able to obtain them for you through interlibrary loan to reduce textbook costs. You may also consider financial aid, if you qualify, to further help defray the steep cost of textbooks. A section on open educational resources (OER) has been included in this guide to help you locate additional, possibly free resources to augment your study.

**Strongly Recommended**


The study materials may be purchased from the Excelsior College Bookstore.

**Optional Resources**

The examination development committee did not identify any specific optional resources for this exam. If you would like to explore topics in more depth, we encourage you to refer to available Open Educational Resources (OER).

**Practice Exam**

There is no corresponding practice exam for Fundamentals of Nursing.

**Reducing Textbook Costs**

Many students know it is less expensive to buy a used textbook, and buying a previous edition is also an option. The Excelsior College bookstore includes a buyback feature and a used book marketplace, as well as the ability to rent digital versions of textbooks for as long as students need them. Students are encouraged to explore these and the many other opportunities available online to help defray textbook costs.
Open Educational Resources

There are many resources available online free of charge that may further enhance your study for the exam. Known as Open Educational Resources (OER), these may be textbooks, courses, tutorials, or encyclopedias. Any additional OER that you find independently should be used to augment study—not as replacements for the Strongly Recommended resources.

Most sites for university-based OER can be searched through www.ocwconsortium.org and/or www.oercommons.org.

Sites that specialize in web courses designed by college professors under contract with the website sponsor, rather than in web versions of existing college courses, include:

- www.education-portal.com
- www.opencourselibrary.org (abbreviated as OCL)

We have included specific courses that cover material for one or more UExcel® exams from the sites in the listings above. It’s worth checking these sites frequently to see if new courses have been added that may be more appropriate or may cover an exam topic not currently listed.

Sites like Khan Academy (www.khanacademy.com) and iTunes U feature relatively brief lessons on very specific topics rather than full courses. Full courses are also available on iTunes U (http://www.apple.com/education/ipad/itunes-u/). We have chosen a few courses and collections for this listing.

Open Online Textbooks

BookBoon
http://bookboon.com/en/textbooks-ebooks

Flatworld Knowledge
http://catalog.flatworldknowledge.com/#our-catalog

College Readiness

Khan Academy
http://www.khanacademy.org/

Hippocampus
http://www.hippocampus.org/

Open Course Library
http://opencourselibrary.org/collg-110-college-success-course/

Study Aids

Education Portal
http://education-portal.com/

Khan Academy
http://www.khanacademy.org/

Annenberg Learner
http://www.learner.org/

OpenCourseWare
http://ocwconsortium.org/en/courses/search

OER Commons
http://www.oercommons.org/

Open Course Library
http://www.opencourselibrary.org/

To achieve academic success, rate yourself at Excelsior College’s Self-Regulated Learning Lab. Visit the Diagnostic Assessment & Achievement of College Skills site at https://srl.daacs.net/ It’s free!
General Description of the Examination

The UExcel Fundamentals of Nursing examination is based on material typically taught in a two-semester sequence in fundamentals of nursing in an associate degree nursing program. The examination focuses on the health problems of adult patients that are commonly encountered by associate degree nurses in health care settings.

The examination measures knowledge and understanding of the concepts of nursing as a profession, communication, patient safety, patient comfort, nutrition, elimination, oxygenation, and fluid and electrolyte balance, as well as the ability to apply this knowledge through use of the nursing process.

Those beginning to study for this exam should have basic knowledge of anatomy, physiology, chemistry, and mathematics.

Learning Outcomes

After you have successfully worked your way through the recommended study materials, you should be able to demonstrate the following learning outcomes:

1. Understand key legal and ethical issues for the profession of nursing. (Aligns to GECC 6.1)
2. Identify the roles and functions of the nurse and the nurse’s responsibilities related to recording and reporting. (Aligns to GECC 1.2)
3. Describe the health continuum, the health care delivery system, Maslow’s hierarchy, and concepts related to the stress response.
4. Describe the nursing process (assessment, analysis, planning, implementation, and evaluation) and define nursing diagnoses and patient goals.
5. Describe theoretical framework and nursing process related to communication and interpersonal relations, asepsis and the body’s defenses, medication administration, physical and environmental safety, hygiene, rest and sleep, mobility and immobility, pain, nutrition, elimination, oxygenation, and fluid and electrolyte balance. (Aligns to GECC 1.1)

General Education Career Competencies Addressed in this Exam

GECC-1: Oral and Written Communication: Present oral communication with appropriate content, organization, and delivery for the audience and purpose. Deliver written communication with appropriate content, organization, syntax, mechanics, and style for the audience and purpose.

GECC-6: Ethical Reasoning: Explain different ethical positions in relation to a problem or issue.
Content Outline

The content outline describes the various areas of the test, similar to the way a syllabus outlines a course. To fully prepare requires self-direction and discipline. Study involves careful reading, reflection, and systematic review.

The major content areas on the Fundamentals of Nursing examination, the percent of the examination, and the hours to devote to each content area are listed below.

<table>
<thead>
<tr>
<th>Content Area</th>
<th>Percent of the Examination</th>
<th>Hours of Study*</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. The Profession of Nursing</td>
<td>8%</td>
<td>29</td>
</tr>
<tr>
<td>II. Communication and Interpersonal Relations</td>
<td>10%</td>
<td>36</td>
</tr>
<tr>
<td>III. Protection and Promotion of Safety</td>
<td>25%</td>
<td>90</td>
</tr>
<tr>
<td>IV. Comfort, Rest, and Activity</td>
<td>15%</td>
<td>54</td>
</tr>
<tr>
<td>V. Nutrition</td>
<td>10%</td>
<td>36</td>
</tr>
<tr>
<td>VI. Elimination</td>
<td>11%</td>
<td>40</td>
</tr>
<tr>
<td>VII. Oxygenation</td>
<td>10%</td>
<td>36</td>
</tr>
<tr>
<td>VIII. Fluid and Electrolyte Balance</td>
<td>11%</td>
<td>40</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
<td></td>
</tr>
</tbody>
</table>

*Approximate: For those examinees who know the topic well, less time may be needed to learn the subject matter. For those who are new to the subject matter, more time may be required for study.

NOTE: Occasionally, examples will be listed for a content topic are to help clarify that topic. However, the content of the examination is not limited to the specific examples given.

I. The Profession of Nursing

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- **Ch. 3**, Nursing Theories and Conceptual Frameworks
- **Ch. 4**, Legal Aspects of Nursing
- **Ch. 5**, Values, Ethics, and Advocacy
- **Ch. 6**, Health Care Delivery Systems

Ch. 10, Critical Thinking and Nursing Practice
Ch. 15, Documenting and Reporting
Ch. 16, Health Promotion
Ch. 17, Health, Wellness, and Illness
Ch. 42, Stress and Coping

A. Legal issues in nursing

1. General legal concepts: statutory, common, civil, and criminal laws
2. Nurse practice acts
   a. Definition and purposes of nurse practice acts
   b. Impact on the practice of nursing
   c. ANA Standards of Care
d. Licensure: legal requirements, grounds for revocation, grounds for suspension, credentialing

3. Legal liability in nursing
   a. Types of crimes: felonies, misdemeanors
   b. Areas of liability: torts, negligence, invasion of privacy, defamation of character, assault and battery, false imprisonment, abandonment
   c. Good Samaritan Laws
   d. Informed consent
   e. A Patient’s Bill of Rights
   f. Advance directives

B. Roles and functions of the nurse
   1. Caregiver
   2. Decision maker
   3. Communicator
   4. Manager of care
   5. Advocate
   6. Teacher

C. Ethics and values in nursing
   1. ANA Code of Ethics
   2. Resolution of ethical problems
   3. Nature and function of values

D. Basic nursing concepts
   1. The health continuum
      a. Wellness-illness continuum
      b. Factors influencing health
         1) Individual factors (for example: genetics, age)
         2) Environmental factors (for example: occupational hazards, stress)
         3) Socioeconomic and cultural factors (for example: lifestyle, single-parent households, fast foods, health practices)
      c. Effects of hospitalizations and/or illness (for example: loss of income, change in self-image, disruption of family)
   2. The health care delivery system
   3. Maslow’s hierarchy of needs
      a. Structure of hierarchy
      b. Implication for nursing care
   4. Homeostasis and adaptation to stress
      a. General concepts of homeostasis and regulatory mechanisms
      b. General concept and nature of stress based on Selye’s theory
      c. Factors influencing adaptation (for example: age, lifestyle, occupation, coping strategies)
      d. Psychophysiological signs of increased stress (for example: changes in vital signs, memory or perceptual changes)
   5. Psychophysiological adaptations to stress (for example: fight or flight response, rest and activity changes, defense mechanisms)

E. Nursing process methodology
   1. Purposes
   2. Steps
      a. Assessment: establishing a database concerning patient needs, including gathering subjective and objective data and assessing individual factors related to health
      b. Diagnosis: identification of the patient’s actual or potential nursing diagnoses after analyzing and interpreting data
      c. Planning: setting priorities, identifying patient-centered outcomes and selecting nursing interventions to achieve those outcomes using clinical pathways
      d. Implementation: using nursing interventions to help the patient achieve goals
      e. Evaluation: determining the extent to which outcomes have been achieved
3. Elements of a nursing diagnosis statement according to North American Nursing Diagnosis Association Taxonomy, 1997

4. Characteristics of a goal: measurable, patient-oriented, attainable with a specified time period

F. Recording and reporting

1. Concepts and principles
   a. Purposes of recording: charting, documentation (for example: providing a record of care given, charting patient's response to care, evaluation and revision of the nursing care plan)
   b. Purposes of reporting: intermittent, change-of-shift (for example: promoting continuity of patient care, evaluation of effectiveness of nursing interventions)
   c. Principles of written communication (for example: accuracy, legibility, legality, abbreviations)
   d. Principles of oral communication (for example: objectivity, clarity, timeliness)

2. Inclusion of appropriate information when recording and reporting (for example: when using narrative method, when using SOAP method; on a medication administration record, on a nursing care plan, in a team conference, at change-of-shift)

II. Communication and Interpersonal Relations

A. Theoretical framework
   1. Therapeutic communication
      a. Definition and goals
      b. Types of communication: verbal, nonverbal
      c. Principles of therapeutic communication
         1) Techniques that facilitate communication
         2) Techniques that block communication
   2. The nurse-patient relationship
      a. Definition and outcomes of the nurse-patient relationship
      b. Components of the nurse-patient relationship
      c. Phases of the nurse-patient relationship
   3. Factors influencing the communication process (for example: cultural, sensory losses, language barriers, perception of the relationship, personal experiences and needs, attitudes)
   4. Patient instruction: principles of teaching/learning

B. Nursing care
   1. Assessment: establish a database concerning communication

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Ch. 11, Assessing
Ch. 12, Diagnosing
Ch. 13, Planning
Ch. 14, Implementing and Evaluating
Ch. 25, Caring
Ch. 26, Communicating
Ch. 27, Teaching
Ch. 30, Health Assessment
a. Gather objective and subjective data (for example: primary language, use of sign language, unable to read, hearing ability)
b. Assess factors influencing communication and the nurse-patient relationship (see IIA3)

2. Diagnosis: identify the patient's actual or potential nursing diagnoses related to communication

a. Analyze and interpret data (for example: patterns of communication, readiness for learning)
b. Identify nursing diagnoses (for example: impaired verbal communication related to oral surgery; knowledge deficit: low-calorie diet related to recently ordered therapy)

3. Planning: set priorities, identify patient-centered outcomes and select interventions related to communication

a. Set priorities and establish outcomes (for example: patient will communicate needs using an alternate means of communication [whiteboard]; patient will make appropriate meal selections)
b. Incorporate factors influencing communication in planning patient care (see IIA3)
c. Select nursing interventions to facilitate communication (for example: provide the patient with a “magic slate”; select materials appropriate to the patient’s educational level)

4. Implementation: use nursing interventions to achieve outcomes related to communication and the nurse-patient relationship

a. Use facilitative communication techniques (see IIA1c)
b. Establish a therapeutic nurse-patient relationship (see IIA2)

5. Evaluation: determine the extent to which outcomes have been achieved

a. Evaluate, record, and report the patient’s response to nursing actions (for example: due to sedation, patient is not able to use the magic slate; patient selects foods appropriate to a low-calorie diet)
b. Modify the plan of care if necessary

III. Protection and Promotion of Safety

25 PERCENT OF EXAM

Berman

Ch. 31, Asepsis
Ch. 32, Safety
Ch. 35, Medications
Ch. 36, Skin Integrity and Wound Care
Ch. 38, Sensory Perception

A. Asepsis

1. Theoretical framework
   a. Chain of infection
   b. Principles of medical and surgical asepsis
   c. Methods of transmission (for example: direct contact, vehicles, airborne)
   d. Standard (universal) precautions
   e. Factors influencing an individual's susceptibility to infection (for example: stress, nutritional status, physical status, medications, heredity, lifestyle, socioeconomic status, occupation)

2. Nursing care
   a. Assessment: establish a database concerning asepsis
      1) Gather objective and subjective data (for example: WBC count [normal values], history of exposure to pathogens, fever, thirst)
2) Assess factors influencing susceptibility to infection (see IIIA1e)

b. Diagnosis: identify the patient's actual or potential nursing diagnoses related to asepsis
1) Analyze and interpret data (for example: identify pathogen and possible method of transmission)
2) Identify nursing diagnoses (for example: high risk for infection related to poor nutritional status and exposure to pathogens)

c. Planning: set priorities, identify patient-centered outcomes and select appropriate interventions related to asepsis
1) Set priorities and establish outcomes (for example: patient will wash hands after using the toilet)
2) Incorporate factors influencing the individual's susceptibility to infection (see IIIA1e)
3) Select nursing interventions to help the patient achieve the outcomes (for example: utilize appropriate aseptic measures, determine appropriate barriers)

d. Implementation: use nursing interventions to achieve the outcomes related to asepsis
1) Use nursing measures to contain organisms (for example: use medical asepsis)
2) Use nursing measures to exclude organisms (for example: use surgical asepsis when providing wound care)
3) Instruct the patient regarding prevention of infection (for example: handwashing)

e. Evaluation: determine the extent to which outcomes have been achieved
1) Evaluate, record, and report the patient's response to nursing actions (for example: wound is approximated and free of drainage)
2) Continually reassess the physical environment (for example: dressings are disposed of in a closed container)
3) Modify the plan of care if necessary

B. The body's defenses (includes the body systems, the immune system, and the inflammatory response)

1. Theoretical framework
   a. Physiological responses (for example: antigen-antibody response, leukocytosis, signs of inflammation, secretion of mucus, movement of cilia, removal of waste products, wound healing, fever)
   b. Factors influencing the body's defenses
      1) Individual factors (for example: age, nutritional status, skin integrity, hygienic practices, physical activity, health status, cigarette smoking)
      2) Environmental factors (for example: climate, occupational hazards, exposure to communicable diseases, cigarette smoke, radiation)
   c. Techniques commonly used to promote the body's defenses (for example: application of heat and cold, tetanus booster, flu vaccine)

2. Nursing care
   a. Assessment: establish a database concerning defenses
      1) Gather objective and subjective data (for example: condition of the patient's skin and mucous membrane, vital signs, redness, pain, swelling, WBC count, history of immunizations)
2) Assess factors influencing the body's defenses (see III B1b)

b. Diagnosis: identify the patient's actual or potential nursing diagnoses related to defenses

1) Analyze and interpret data (for example: culture reports, identify impairment of the skin, WBC count [normal values], characteristics of drainage)

2) Identify nursing diagnoses (for example: high risk for infection related to altered skin integrity)

c. Planning: set priorities, identify patient-centered outcomes and select interventions related to defenses

1) Set priorities and establish outcomes (for example: patient will remain afebrile)

2) Incorporate factors influencing the body's defenses (see III B1b)

3) Select nursing interventions to help the patient achieve the outcomes (for example: monitor vital signs q4h)

d. Implementation: use nursing interventions to achieve outcomes related to the body's defenses

1) Use nursing measures to promote the body's defenses (for example: provide adequate nutrition, apply heat and cold treatments, provide wound care, collect specimens for culture)

2) Instruct the patient to support and/or restore the body's defenses (for example: emphasize the need to avoid exposure to infectious agents)

e. Evaluation: determine the extent to which outcomes have been achieved

1) Evaluate, record, and report the patient's response to nursing actions (for example: patient's temperature remains within normal limits)

2) Modify the plan of care if necessary

C. Medication administration

1. Theoretical framework

a. Pharmacokinetics: absorption, distribution, metabolism, excretion

b. Principles of administration: calculations (including equivalents), routes and sites, safety measures, controlled substances, use of nasogastric and gastrostomy tubes, transcribing medication orders

c. Factors influencing medication action and effectiveness (for example: age, sex, weight, psychological factors, time of administration, environment)

2. Nursing care

a. Assessment: establish a database concerning the patient's medication regimen

1) Gather objective and subjective data (for example: history of allergies, vital signs, duration of pain)

2) Assess factors influencing medication action and effectiveness (see III C1c)

b. Diagnosis: identify the patient's actual or potential nursing diagnoses related to medications

1) Analyze and interpret data (for example: changes in vital signs, recognize side effects)

2) Identify nursing diagnoses (for example: noncompliance related to fear of side effects)

c. Planning: set priorities, identify patient-centered outcomes and select interventions related to the patient's medication regimen
1) Set priorities and establish outcomes (for example: patient will adhere to regimen as agreed)

2) Incorporate factors influencing medication action and effectiveness (see IIIC1c)

3) Select nursing interventions to help the patient achieve outcomes (for example: instruct the patient to take the medication with food)

d. Implementation: use nursing interventions to achieve outcomes related to the medication regimen

1) Use nursing measures to safely administer medications (for example: calculation and measurement, patient identification, transcription, accurate recording, selection of correct site, administration of controlled substances)

2) Provide information and instruction regarding the medication regimen (for example: self-administration, storage, reporting side effects)

e. Evaluation: determine the extent to which outcomes have been achieved

1) Evaluate, record, and report the patient’s response to nursing actions (for example: patient adheres to the medication regimen)

2) Modify the plan of care if necessary

D. Safety

1. Theoretical framework

a. Factors influencing an individual's safety

1) Individual factors (for example: age, medications, level of awareness, sensory perception, emotional state)

2) Environmental factors (for example: occupation, presence of lead paint)

3) Socioeconomic and cultural factors (for example: ability to communicate, unemployment)

4) Psychological factors (for example: stress, anxiety)

b. Identification of environmental hazards (for example: physical and mechanical, thermal, chemical, radiation, ecological)

c. Devices commonly used to promote safety (for example: restraints, walkers, siderails)

2. Nursing care

a. Assessment: establish a database concerning the patient's safety needs

1) Gather objective and subjective data (for example: confusion, visual acuity)

2) Determine presence of environmental hazards (see IIID1b)

3) Assess factors influencing the patient's safety (for example: age, hearing impairment) (see IIID1a)

b. Diagnosis: identify the patient's actual or potential nursing diagnoses related to safety

1) Analyze and interpret data (for example: recognize loss of equilibrium, calculate fall risk)

2) Identify nursing diagnoses (for example: high risk for injury related to sensory deficit)
c. Planning: set priorities, identify patient-centered outcomes and select interventions related to safety

1) Set priorities and establish outcomes (for example: patient will request assistance with ambulation)

2) Incorporate factors influencing safety in planning for individualized patient care (for example: consider age, lifestyle, level of consciousness, mobility)

3) Select nursing interventions for alleviating or minimizing safety hazards (for example: modify the environment)

4) Select the appropriate safety device based on the individual’s needs (for example: walkers, restraints)

d. Implementation: use nursing interventions to achieve outcomes related to safety

1) Use nursing measures to provide a safe environment (for example: elevate siderails, use restraining jacket)

2) Use equipment and devices safely (for example: walkers, ice packs, heat applications)

3) Instruct the patient regarding safety (for example: orient to environment, explain use of wheelchair)

e. Evaluation: determine the extent to which outcomes have been achieved

1) Evaluate, record, and report the patient’s response to nursing actions (for example: patient ambulates with the nurse’s assistance)

2) Modify the plan of care if necessary

IV. Comfort, Rest, and Activity

15 PERCENT OF EXAM

Berman

Ch. 33, Hygiene

Ch. 44, Activity and Exercise

Ch. 45, Sleep

Ch. 46, Pain Management

A. Hygiene

1. Theoretical framework

a. Components of hygiene
b. Factors influencing hygiene (for example: cultural factors, age, physical status, body image, self-esteem)
c. Agents commonly used on the skin and mucous membrane (for example: soaps, lotions, emollients, mouthwashes)

2. Nursing care

a. Assessment: establish a database concerning hygiene

1) Gather objective and subjective data (for example: cleanliness of the skin, condition of the nails, complaints of dryness)

2) Assess factors influencing the patient’s hygiene (see IVA1b)

b. Diagnosis: identify the patient’s actual or potential nursing diagnoses related to hygiene

1) Analyze and interpret data

2) Identify nursing diagnoses (for example: altered oral mucous membrane related to mouth breathing)
c. Planning: set priorities, identify patient-centered outcomes and select interventions related to hygiene
   1) Set priorities and establish outcomes (for example: patient’s oral mucous membrane will be pink and moist)
   2) Incorporate factors influencing hygiene in planning patient care (see IVA1b)
   3) Select nursing interventions to achieve outcomes (for example: provide mouth care q2h)

d. Implementation: use nursing interventions to achieve outcomes related to hygiene
   1) Use nursing measures to provide comprehensive hygienic care (for example: bathing, hair care, nail care, skin care, perineal care)
   2) Use nursing measures to promote psychological comfort (for example: provide privacy during bathing)
   3) Provide information and instruction (for example: instruct the patient on the use of dental floss, discuss indications for use of skin lotions rather than alcohol-base skin products)

e. Evaluation: determine the extent to which outcomes have been achieved
   1) Evaluate, record, and report the patient’s response to nursing actions (for example: the patient’s lips remain dry and cracked)
   2) Modify the plan of care if necessary

B. Rest and sleep

1. Theoretical framework
   a. Principles related to rest and sleep (for example: sleep stages, circadian rhythm)
   b. Factors influencing rest and sleep (for example: age, noise level, fatigue, use of caffeine, use of alcohol, hospitalization, sensory deprivation)
   c. Agents commonly used to promote rest and sleep (sedatives, hypnotic)

2. Nursing care
   a. Assessment: establish a database concerning rest and sleep
      1) Gather objective and subjective data (for example: usual sleep habits, use of over-the-counter medications, bedtime routines)
      2) Assess factors influencing the patient’s rest and sleep (see IVB1b)
   b. Diagnosis: identify the patient’s actual or potential nursing diagnoses related to rest and sleep
      1) Analyze and interpret data (see IVB2a)
      2) Identify nursing diagnoses (for example: sleep pattern disturbance related to unfamiliar surroundings)
   c. Planning: set priorities, identify patient-centered outcomes and select interventions
      1) Set priorities and establish outcomes (for example: patient will get six hours of uninterrupted sleep per night)
      2) Incorporate factors influencing rest and sleep (see IVB1b)
      3) Select nursing interventions to help the patient achieve outcomes (for example: reorient the patient to the surroundings)
d. Implementation: use nursing interventions to achieve outcomes related to rest and sleep

1) Use nursing measures to induce rest and sleep (for example: administer a backrub, provide a bedtime snack, provide a quiet environment)

2) Use nursing measures specific to drug classifications for prescribed medications (for example: raise the siderails after administering a sleep medication)

3) Use nursing measures to modify the environment (for example: provide sensory stimulation, prevent sensory overload)

4) Provide information and instruction (for example: discuss relaxation techniques with the patient)

e. Evaluation: determine the extent to which outcomes have been achieved

1) Evaluate, record, and report the patient's response to nursing actions (for example: patient states that he feels well rested)

2) Modify the plan of care if necessary

C. Mobility and immobility

1. Theoretical framework

a. Principles of body mechanics, transfer, ambulation, range-of-motion, exercise

b. Responses of body systems to mobility (for example: improved circulation, peristalsis)

c. Complications resulting from immobility (for example: muscle weakness, contractures, retained secretions, decubitus ulcers, hypostatic pneumonia, constipation)

2. Nursing care

a. Assessment: establish a database concerning mobility and immobility

1) Gather objective and subjective data (for example: range-of-motion, skin integrity, elimination patterns, activity level, joint mobility, muscle strength)

2) Assess the patient's responses to mobility and immobility (see IVC1b–c)

b. Diagnosis: identify the patient's actual or potential nursing diagnoses related to mobility or immobility

1) Analyze and interpret data

2) Identify nursing diagnoses (for example: high risk for impaired physical mobility related to bed rest, activity intolerance)

c. Planning: set priorities, identify patient-centered outcomes, and select appropriate interventions related to mobility or immobility

1) Set priorities and establish outcomes (for example: patient will maintain usual range of motion in all joints)

2) Consider the responses of the body to mobility and immobility (see IVC1b–c)

3) Select nursing interventions to help the patient achieve outcomes (for example: supervise the patient in active range-of-motion exercises t.i.d.)

d. Implementation: use nursing interventions to achieve outcomes related to mobility or immobility

1) Use appropriate devices to maintain normal body alignment (for example: footboard, pillows, trochanter roll)
2) Use nursing measures to promote mobility and maintain muscle tone (for example: range of motion, ambulation, positioning)
3) Use nursing measures to prevent tissue breakdown (for example: massage, pressure-relieving devices, turning)
4) Use nursing measures to prevent complications related to immobility (for example: leg exercises, antiembolism stockings, deep breathing and coughing)
5) Instruct the patient regarding activity needs
e. Evaluation: determine the extent to which outcomes have been achieved
   1) Evaluate, record, and report the patient’s response to nursing actions (for example: patient’s joints are freely movable within normal range of motion)
   2) Modify the plan of care if necessary

D. The pain experience

1. Theoretical framework
   a. Concepts related to pain (for example: gate control theory, acute vs. chronic pain, pain threshold, endorphins)
   b. Factors influencing pain (for example: etiology of pain, duration of pain, sensory overload, cultural factors)
   c. Agents and techniques commonly used to control pain (for example: guided imagery, relaxation, administration of nonnarcotic analgesics, narcotic analgesics, patient-controlled analgesia, placebos, cutaneous stimulation)

2. Nursing care
   a. Assessment: establish a database concerning pain

1) Gather objective and subjective data (for example: changes in vital signs, facial expression, body language, verbalization by the patient)
2) Assess factors influencing the patient’s pain (see IVD1b)

b. Diagnosis: identify the patient’s actual or potential nursing diagnoses related to pain
   1) Analyze and interpret data
   2) Identify nursing diagnoses (for example: pain related to recent abdominal surgery)

c. Planning: set priorities, identify patient-centered outcomes and select interventions related to pain
   1) Set priorities and establish outcomes (for example: patient will report decrease in pain)
   2) Incorporate factors influencing pain (see IVD1b)
   3) Select nursing interventions to help the patient achieve outcomes (for example: position the patient to minimize stress on the incision; administer pain medication on a regular schedule)

d. Implementation: use nursing interventions to achieve outcomes related to pain
   1) Use nursing measures to reduce the patient’s pain (for example: positioning, cutaneous stimulation, assess the operative site, promote relaxation)
   2) Use nursing measures specific to drug classifications for prescribed medications (for example: monitor vital signs for a patient receiving a narcotic analgesic, schedule administration of medications to maximize effectiveness)
3) Instruct the patient regarding pain (for example: use of relaxation techniques, use of guided imagery)

   e. Evaluation: determine the extent to which outcomes have been achieved
      1) Evaluate, record, and report the patient’s response to nursing interventions (for example: patient states that pain has been relieved)
      2) Modify the plan of care if necessary

V. Nutrition

10 PERCENT OF EXAM

Berman
Ch. 47, Nutrition

A. Theoretical framework
   1. Processes of ingestion, digestion, and absorption of nutrients
   2. Normal nutritional requirements
      a. Food Guide Pyramid
      b. Basic functions and common food sources of carbohydrates, proteins, fats, vitamins, minerals
      c. Caloric values
   3. Common nutritional disturbances (for example: vomiting, heartburn, obesity, anorexia, malnutrition)
   4. Factors influencing nutrition
      a. Individual factors (for example: age, sedentary lifestyle, vegetarian diet, dental status, physical condition, need for assistance with feeding)
      b. Socioeconomic and cultural factors (for example: income, religion)
      c. Psychological factors (for example: fad diets, anorexia)
   5. Adaptations of normal diet: definitions, foods allowed, and indications for use
      a. Clear liquid
      b. Full liquid
      c. Soft

6. Alternative feeding methods (for example: gavage, gastrostomy)

7. Agents commonly used to promote nutrition (for example: vitamins and minerals)

B. Nursing care

1. Assessment: establish a database concerning nutritional status
   a. Gather objective and subjective data (for example: weight, height, anorexia)
   b. Assess factors influencing nutrition (see VA4)

2. Diagnosis: identify the patient’s actual or potential nursing diagnoses related to nutrition
   a. Analyze and interpret data (for example: serum albumin, body weight)
   b. Identify nursing diagnoses (for example: imbalanced nutrition: less than body requirements related to anorexia)

3. Planning: set priorities, identify patient-centered outcomes and select interventions related to nutrition
   a. Set priorities and establish outcomes (for example: patient will gain one pound per week until ideal body weight is achieved)
   b. Incorporate factors influencing nutrition in planning for patient’s dietary needs (for example: plan nutritionally adequate diet based on patient’s cultural preferences) (see VA4)
   c. Select nursing interventions to help the patient achieve outcomes related to nutrition

4. Implementation: use nursing interventions to achieve outcomes related to nutrition
a. Use nursing measures to increase nutritional intake (for example: assist in food selection, assist in feeding, modify the environment, place the patient in the most appropriate position)

b. Use nursing measures appropriate to particular feeding methods (for example: nasogastric tube feedings, gastrostomy tube feedings)

c. Use nursing measures specific to drug classifications for prescribed medications (for example: administer liquid iron through a straw)

d. Instruct the patient regarding nutrition

5. Evaluation: determine the extent to which outcomes have been achieved

a. Evaluate, record, and report the patient's response to nursing interventions (for example: the patient has gained two pounds this week)

b. Modify the plan of care if necessary

VI. Elimination

**11 PERCENT OF EXAM**

*Berman*

**Ch. 48, Urinary Elimination**

**Ch. 49, Fecal Elimination**

A. Theoretical framework

1. Urinary elimination
   a. Anatomy and physiology of urinary tract
   b. Common disturbances (for example: incontinence, frequency, retention, urgency)

2. Intestinal elimination
   a. Anatomy and physiology of intestinal tract
   b. Common disturbances (for example: constipation, diarrhea, impaction, flatulence, incontinence)

3. Factors influencing elimination
   a. Individual factors (for example: age, activity level, dietary habits)
   b. Environmental factors (for example: privacy)
   c. Psychological factors (for example: stress)

4. Agents commonly used to promote elimination (for example: laxatives, stool softeners, antidiarrheal agents)

B. Nursing care

1. Assessment: establish a database concerning elimination
   a. Gather objective and subjective data (for example: changes in normal elimination patterns; color, odor, and consistency of urine and feces)
   b. Assess factors influencing elimination (see VIA3)

2. Diagnosis: identify the patient's actual or potential nursing diagnoses related to elimination
a. Analyze and interpret data (for example: urinalysis, normal values, frequency of elimination, intake and output, presence of occult blood)

b. Identify nursing diagnoses (for example: constipation related to insufficient intake of dietary fiber)

3. Planning: set priorities, identify patient-centered outcomes and select interventions related to elimination

a. Set priorities and establish outcomes (for example: patient will have one soft brown stool daily)

b. Incorporate factors influencing elimination in planning patient care (for example: the patient is on bed rest) (see VIA3)

c. Select nursing interventions to help the patient achieve outcomes (for example: consult with the dietician about increasing fiber in the patient’s diet)

4. Implementation: use nursing interventions to achieve outcomes related to elimination

a. Use nursing measures to facilitate elimination (for example: perform catheterization, administer enema, administer laxatives and stool softeners, provide appropriate intake, collect specimens, ensure appropriate activity, decrease stress, provide proper positioning, ensure privacy)

b. Use nursing measures specific to drug classifications for prescribed medications (for example: administer a laxative at the time that evacuation is desired, encourage the patient to retain the suppository for 15 minutes)

c. Instruct the patient regarding elimination (for example: assist patient to plan an exercise program and to increase intake of fluids)

5. Evaluation: determine the extent to which outcomes have been achieved

a. Evaluate, record, and report the patient’s response to nursing actions (for example: patient reports passing a hard, dry stool)

b. Modify the plan of care if necessary

VII. Oxygenation

10 PERCENT OF EXAM

Berman

Ch. 50, Oxygenation

A. Theoretical framework

1. Normal respiratory functions
   a. Anatomy and physiology
   b. Ventilation, diffusion, and transport

2. Common respiratory disturbances (for example: dyspnea, tachypnea, orthopnea, hypoxia)

3. Factors influencing oxygenation
   a. Individual factors (for example: fever, activity level, excess secretions)
   b. Environmental factors (for example: smoking, room ventilation)
   c. Psychological factors (for example: stress, anxiety)

4. Techniques commonly used to promote oxygenation (for example: administration of oxygen via nasal cannula and face mask, incentive spirometry, chest physiotherapy)

B. Nursing care

1. Assessment: establish a database concerning oxygenation status
   a. Gather objective and subjective data (for example: skin color, tolerance for activity, vital signs, respiratory status, shortness of breath, confusion, restlessness)
   b. Assess factors influencing oxygenation (see VIIA3)
2. Diagnosis: identify the patient’s actual or potential nursing diagnoses related to oxygenation
   a. Analyze and interpret data (for example: vital signs, hemoglobin, hematocrit [normal values], oxygen saturation)
   b. Identify nursing diagnoses (for example: ineffective breathing pattern related to abdominal pain)

3. Planning: set priorities, identify patient-centered outcomes and select interventions related to oxygenation
   a. Set priorities and establish outcomes (for example: patient will demonstrate increased depth of respiration)
   b. Incorporate factors influencing oxygenation in planning patient care (for example: pain assessment, anxiety, positioning)
   c. Select nursing interventions to help the patient achieve outcomes (for example: provide comfort measures, reposition the patient, administer the prescribed analgesic)

4. Implementation: use nursing interventions to achieve outcomes related to oxygenation
   a. Use nursing measures to promote oxygenation (for example: turning, deep breathing, and coughing; administering oxygen; nasopharyngeal suctioning; monitoring vital signs; reducing anxiety)
   b. Use nursing measures appropriate to the method of oxygen administration (humidifiers, oxygen masks, cannula)
   c. Instruct the patient regarding oxygenation (for example: demonstrate coughing and deep-breathing exercises)

5. Evaluation: determine the extent to which outcomes have been achieved
   a. Evaluate, record, and report the patient’s response to nursing actions (for example: patient’s respirations are 12–14/minute, deep and rhythmic)
   b. Modify the plan of care if necessary

VIII. Fluid and Electrolyte Balance

11 PERCENT OF EXAM

Berman

Ch. 52, Fluid, Electrolyte, and Acid-Base Balance

A. Concepts and principles
   1. Principles related to fluid and electrolyte balance (for example: composition, regulation, and movement of fluid and electrolytes)
   2. Common disturbances of fluid and electrolyte balance
      a. Hypercalcemia, hypocalcemia
      b. Hyperkalemia, hypokalemia
      c. Hypernatremia, hyponatremia
      d. Hypermagnesemia, hypomagnesemia
      e. Hypervolemia, hypovolemia
   3. Common intravenous fluids
      a. Lactated Ringer’s
      b. 5% dextrose and water
      c. Normal saline
      d. Half saline
   4. Factors influencing fluid and electrolyte balance
      a. Physical status (for example: vomiting, fever, diarrhea, use of diuretics, exercise)
b. Environmental factors (for example: temperature, humidity)

5. Agents commonly used to promote fluid and electrolyte balance (for example: administration of IV fluids, electrolyte supplements)

B. Nursing care

1. Assessment: establish a database concerning fluid and electrolyte status.
   a. Gather objective and subjective data (for example: skin turgor, pulse quality, condition of oral mucous membranes, output, weight, edema, muscle weakness, thirst)
   b. Assess factors influencing fluid and electrolyte status (see VIII A4)

2. Diagnosis: identify the patient's actual or potential nursing diagnoses related to fluids and electrolytes
   a. Analyze and interpret data (for example: serum electrolyte level, hematocrit [normal values] specific gravity of urine [normal values])
   b. Identify nursing diagnoses (for example: fluid volume deficit related to insufficient intake)

3. Planning: set priorities, identify patient-centered outcomes and select interventions related to fluids and electrolytes
   a. Set priorities and establish outcomes (for example: patient's total fluid intake will be 2,500 cc/day)
   b. Incorporate factors influencing fluid and electrolyte status (for example: establish a pattern of fluid intake based on individual patient preferences) (see VIII A4)
   c. Select nursing interventions to help the patient achieve outcomes (for example: monitor IV therapy, provide oral fluids)

4. Implementation: use nursing interventions to achieve outcomes related to fluid and electrolyte balance
   a. Promote fluid and electrolyte balance (for example: assist with food and fluid selection, measure and record intake and output)
   b. Use nursing measures appropriate to oral and parenteral replacement (for example: establish daily fluid regimen with patient, assist with parenteral administration of fluids [gravity flow and IV infusion pumps], identify signs and symptoms of untoward reactions)
   c. Instruct the patient regarding fluid and electrolyte requirements (for example: discuss dietary sources of potassium)

5. Evaluation: determine the extent to which outcomes have been achieved
   a. Evaluate, record, and report the patient's response to nursing actions (for example: patient's 24-hour fluid intake is 2,500 cc)
   b. Modify the plan of care if necessary
**Sample Questions**

The sample questions give you an idea of the level of knowledge expected in the exam and how questions are typically phrased. They are not representative of the entire content of the exam and are not intended to serve as a practice test.

Rationales for the questions can be found on pages 28–31 of this guide. In that section, the correct answer is identified and each answer is explained. The number in parentheses at the beginning of each rationale refers to the corresponding section of the content outline. For any questions you answer incorrectly, return to that section of the content outline for further study.

You will be provided with an erasable white board to use during your exam. During your exam, a basic 8-function calculator will also be available on your computer. A typical calculator is provided at the back of this content guide.

1. A mentally competent patient refuses an injection. The nurse administers the injection despite the patient’s refusal. In this situation, the nurse can be held liable for which offense?
   1) assault
   2) battery
   3) invasion of privacy
   4) a misdemeanor

2. Which term describes the rules or principles that govern professional conduct?
   1) beliefs
   2) ethics
   3) morals
   4) values

3. A patient is being admitted to the hospital. The nurse notes that the patient’s pulse and blood pressure are higher than they were on previous routine office visits. How should the nurse interpret these findings initially?
   The findings are indicative of
   1) the resistance stage of stress.
   2) an autonomic nervous system response.
   3) an inflammatory response.
   4) the local adaptation syndrome.

4. Which observation is most indicative of a localized infection?
   1) diaphoresis
   2) fatigue
   3) fever
   4) swelling

5. Which information in a patient’s health history indicates that the patient is at risk for infection?
   1) The patient had mumps three years ago.
   2) The patient had rubella one year ago.
   3) The patient had a tetanus booster 12 years ago.
   4) The patient was a year late receiving the polio vaccine.
6. A patient is being discharged with an indwelling urinary catheter. Which instruction should the nurse give to the patient to help prevent a urinary tract infection?
   1) Allow the collection bag to fill completely before emptying it.
   2) Separate the catheter from the tubing when emptying the collection bag.
   3) Clamp the tubing before exercising or ambulating.
   4) Position the tubing so the urine flows into the collection bag.

7. Which assessment finding indicates that a hospitalized patient is at risk for physical injury?
   1) diminished lung sounds
   2) hyperactive bowel sounds
   3) weak right hand grasp
   4) bilateral +1 ankle edema

8. When administering a medication via the Z-track method, the nurse should include which action?
   1) Massage the site following the injection.
   2) Give the injection into subcutaneous tissue.
   3) Change the needle prior to the injection.
   4) Administer the medication rapidly.

9. When administering a medication to a patient with decreased liver function, the nurse should be most concerned with which mechanism of the drug’s action?
   1) absorption
   2) distribution
   3) excretion
   4) metabolism

10. Which instruction should the nurse give to a patient who uses a bath oil?
    1) Be certain to remove all oil residue from the skin.
    2) Take precautions to prevent falls in the bathtub.
    3) Alternate the use of bath oil with a skin lotion.
    4) Use a washcloth to apply the bath oil.

11. To which stage of sleep will a patient return after being awakened for a treatment?
    1) the stage from which she was awakened
    2) the first stage of sleep
    3) the rapid eye movement stage
    4) the second stage of sleep

12. A patient is on bed rest. To avoid a complication of immobility, the nurse should give priority to which assessment?
    1) activity tolerance
    2) bowel sounds
    3) lung sounds
    4) urinary output

13. Which analgesic is most commonly associated with an increased incidence of gastric bleeding in older adults?
    1) acetaminophen (Tylenol)
    2) codeine
    3) indomethacin (Indocin)
    4) meperidine hydrochloride (Demerol)

14. Which measure should the nurse include in the plan of care for a patient who is experiencing pain?
    1) Implement pain relief measures before the pain becomes severe.
    2) Use the same pain relief measure for each pain experience.
    3) Administer pain medications on a predetermined schedule.
    4) Encourage the patient to increase the intervals between pain medication requests.

15. Which food is highest in saturated fat?
    1) butter
    2) margarine
    3) olive oil
    4) peanut oil

16. Which observation indicates that a patient is responding positively to oxygen therapy?
    1) dyspnea
    2) eupnea
    3) hyperpnea
    4) orthopnea
17. Which assessment data should alert the nurse to the likelihood that a patient may be experiencing fluid volume deficit?
   1) increased hematocrit
   2) leukocytosis
   3) distended neck veins
   4) peripheral edema

18. When a patient's serum sodium level is 129 mEq/L, the nurse should anticipate an order for which IV fluid?
   1) 5% dextrose in water
   2) 5% dextrose in 0.45% NaCl
   3) 5% dextrose in 0.9% NaCl
   4) lactated Ringer's solution

19. The physician orders an IV infusion of 1,000 cc 0.9% NaCl to run over 10 hours. The IV administration set delivers 10 drops per cc. The nurse should regulate the flow rate at how many drops per minute?
   1) 6 to 7
   2) 16 to 17
   3) 25 to 26
   4) 31 to 32

20. Which instructional technique should maximize independence for a patient who needs to limit sodium in the diet?
   1) Calculate the actual volume of salt in the patient's usual diet.
   2) Provide the patient with a list of foods that must be avoided.
   3) Give the patient a set of written, preplanned, low-sodium menus.
   4) Explain to the patient how to read and interpret food labels.
1. (IA3b)
   1) Assault is a threat or an attempt to make bodily contact with another person without that person’s consent. This nurse actually touched the patient.

   *2) Battery is assault carried out and includes the willful, angry, and violent touching of another person’s body or clothes. Administering an injection after a patient has refused it is a classic example of battery.

   3) The nurse’s action is not an invasion of privacy. An example of invasion of privacy is breach of confidentiality.

   4) A misdemeanor is a classification of a crime; it is not in itself a type of offense.

2. (IC)
   1) Beliefs are individually held attitudes and are not the rules of a profession.

   *2) Ethics are the rules or principles that govern professional conduct; ethics are the expected, publicly stated standards of a particular group.

   3) Morals are personal standards of right and wrong, not the standards of a group.

   4) Values are the beliefs of an individual, not the rules of a profession.

3. (IIB)
   1) The stage of resistance occurs later in an illness, as the body adapts.

   *2) Stress activates the sympathetic nervous system, causing the findings.

   3) The inflammatory response is a localized response to tissue injury or infection.

   4) The local adaptation syndrome occurs when one part of the body responds to an injury.

4. (III B2a)
   1) Diaphoresis is a systemic response to fever and infection.

   2) Fatigue is a systemic response to infection.

   3) Fever is a systemic response to infection.

   *4) Swelling occurs when blood vessels dilate to increase blood flow to localized infectious agents.

5. (III B1b)
   1) This would have no effect on a patient’s risk for infection.

   2) See 1).

   *3) A tetanus booster should be repeated every 10 years in adults, so this patient is susceptible to tetanus, that is, at risk for infection.

   4) The patient did receive the polio vaccine, even though it was late, so the patient is immune to polio and not at risk for infection.

*correct answer
6. (III B2c)  
1) A full bag of standing urine is a medium for bacterial growth.
2) The drainage system should remain intact. Breaking the connection allows a portal for bacteria to enter the system.
3) Clamping the tubing promotes stasis of urine in the bladder.
*4) Positioning the tubing correctly promotes drainage and limits urinary stasis, thereby limiting bacterial growth.

7. (III B2a)  
1) Diminished breath sounds place a patient at risk for impaired gas exchange, not physical injury.
2) Hyperactive bowel sounds do not place a patient at risk for physical injury.
*3) A weak right hand grasp indicates the patient has altered mobility, placing the patient at risk for physical injury.
4) Bilateral ankle edema is an indicator of fluid volume excess which does not place a patient at risk for physical injury.

8. (III C1b)  
1) Massaging the site following the injection is not recommended because it may force the medication back into the needle track and cause irritation.
2) The Z-track method is used for intramuscular injections, not subcutaneous injections.
*3) Changing the needle prior to the injection ensures that no medication clings to the needle as it is inserted through the subcutaneous tissue into the muscle where it is injected.
4) The medication should not be administered rapidly. It is injected slowly and the needle is allowed to remain in place for 10 seconds after injecting the medication.

9. (III C2a)  
1) Absorption is the process by which a drug is transferred from its site of entry to the bloodstream.
2) Distribution is the movement of a drug throughout the body. The rate of distribution depends on perfusion and capillary permeability of the drug. Distribution usually does not involve the liver.
3) Excretion is the removal of a drug from the body. The kidneys excrete most drugs.
*4) Metabolism is the breakdown of a drug into inactive form. Liver disease may interfere with this process.

10. (III D2d)  
1) A small amount of oil on the skin will help to moisturize.
*2) Oil is a slippery substance and can cause falls in the bathtub.
3) Alternating the use of bath oil with a skin lotion is personal preference and not a priority instruction for the patient.
4) The oil can be applied any way the patient likes. This is not a priority instruction.

11. (IV B1a)  
1) The patient will not return to the stage from which she was awakened.
*2) After being awakened, a patient begins the sleep cycle at stage one and progresses through all of the stages.
3) See 2).
4) See 2).

12. (IV C1c)  
1) The inability to endure or complete daily activities is not life threatening.
2) Poor gastrointestinal elimination is not life threatening.
*3) Loss of respiratory functioning may become a serious threat to health.
4) Urinary problems have a lower priority than do pulmonary problems.

*correct answer
13. (IVD1c)
1) Tylenol is not associated with gastric bleeding.
2) Codeine is a narcotic analgesic and is not associated with gastric bleeding.
*3) Indocin is a nonsteroidal anti-inflammatory agent (NSAID). NSAIDs have been associated with gastric irritation and bleeding. Indocin is especially difficult to tolerate and should be used cautiously, if at all, in older adults.
4) Demerol is a narcotic analgesic and is not associated with gastric bleeding.

14. (IVD2c)
*1) Providing an analgesic before the onset of pain is preferable. If the nurse waits for the patient to report pain, a larger dose may be required.
2) Pain may vary in intensity from moment to moment and different pain relief measures may be required to control pain.
3) The choice of pain relievers is based on the patient's report of pain. Report of mild pain may require a different analgesic than more severe pain.
4) Pain therapy should not increase discomfort or harm the patient. In a trusting relationship, the nurse should manage the patient's pain regardless of the time intervals.

15. (VA2b)
*1) Butter, being of animal origin, contains saturated fat.
2) Margarine contains monounsaturated fat.
3) Olive oil contains monounsaturated fat.
4) Peanut oil contains monounsaturated fat.

16. (VIIIB1b)
1) Dyspnea, feeling short of breath, is not a positive response to oxygen therapy.
*2) Eupnea, normal effortless breathing, is a positive response to oxygen therapy.
3) Hyperpnea, an increased depth of respiration, is not a positive response to oxygen therapy.
4) Orthopnea, the inability to breathe except in an upright position, is not a positive response to oxygen therapy.

17. (VIIIA1)
*1) Loss of fluid makes the blood more concentrated and results in an increased hematocrit.
2) Leukocytosis is an elevated WBC and is evidence of infection, not fluid volume deficit.
3) Distended neck veins are an indicator of fluid volume excess.
4) Peripheral edema is an indicator of fluid volume excess.

18. (VIIIB1b)
1) A 5% dextrose in water solution is sodium-free and would not be used for a patient with hyponatremia.
2) A 5% dextrose in 0.45% NaCl solution only contains half as much sodium as does normal blood and would not be used for a patient with hyponatremia.
*3) A 5% dextrose in 0.9% NaCl solution is normal saline and would provide additional intake of sodium for a patient with hyponatremia.
4) Lactated Ringer's solution is an isotonic solution used primarily for maintaining or replacing volume.

19. (VIIIB3b)
1) See 2).
*2) The standard formula for calculating IV flow rate is:
\[
\text{volume (mL)} \times \frac{\text{drop factor (gtt/mL)}}{\text{time in minutes}} \times \frac{1,000}{10} \times \frac{10}{600} = 16.66
\]
3) See 2).
4) See 2).

*correct answer
20.(VIII B3c)

1) Calculating the volume of salt in the patient's diet does not teach the patient how to limit sodium in the diet.

2) Giving the patient a list of foods to avoid may provide information regarding foods high in sodium, but it does not teach the patient how to read and interpret food labels.

3) Giving the patient a set of preplanned menus does not allow for flexibility in the diet and patients often have difficulty complying with strict plans.

4) Sodium is found in many foods and the patient must know how to read and interpret food labels in order to calculate a daily intake. The patient can then include personal preferences in the dietary plan, which should improve compliance with limiting sodium.

*correct answer
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• arrive at the test site rested and prepared to concentrate for an extended period
• allow sufficient time to travel, park, and locate the test center
• be prepared for possible variations in temperature at the test center due to weather changes or energy conservation measures
• bring your ID, but otherwise, don’t weigh yourself down with belongings that will have to be kept in a locker during the test.

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Excelsior College, the test developer, recommends granting eight (8) semester hours of lower-level undergraduate credit to students who receive a letter grade of C or higher on the UExcel Exam in Fundamentals of Nursing. Other colleges and universities also recognize this exam as a basis for granting credit or advanced standing. Individual institutions set their own policies for the amount of credit awarded and the minimum acceptable grade.

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Excelsior College
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Test Date: 11/21/2020

Letter Grade: C

Examination Code and Title: 210 Statistics
Recommended Credit:
3 Lower Level

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