**Chapter 1: Nursing Science and Theory: Scientific Underpinnings for Practice**

1. Why is it that, when the nursing profession attempts to differentiate nursing science within a specific metaparadigm, it can isolate nursing inquiry from other domains and contribute to the theory-practice gap?

Suggested answer: Students may discuss how nursing derives its knowledge from a variety of theory domains. These domains include biology, physiology, zoology, medicine, psychology, sociology, physics, mathematics, chemistry, communication, philosophy, and theology. By limiting nursing to nursing science, it prevents us from viewing the entire basis from which nursing is derived and it prevents us from drawing on the other disciplines’ knowledge and theory to support the work of nursing. Students may also note how using research to answer questions related to nursing practice may require us to look in the databases for the other disciplines to fully answer the questions posed. Consider leading the discussion to explore other bodies of research that students have used to answer questions in the past. For example, a question about care-giver stress may use literature from the psychology and sociology domains.

2. Why is it important for nursing science to be different than medical science in order to thoroughly address the needs of the patients served by advanced practice nurses?

Suggested answer: Medical science solves diagnostic problems and tends toward a mechanistic view of the human in which the solution can be derived by identifying the problem and prescribing treatment. Nurses use a holistic theory and approach, which views the human as an entire system and broadly addresses the patient in an all-encompassing manner. This approach allows nurses to assess the whole person and their environment to work toward solutions based on more than the disease process or condition. The holistic approach considers the entire patient picture and applies the multiple domains of science to the solution. Patients served by the advanced practice nurse can profit from being viewed as a complete system benefiting from the application of different aspects of various scientific domains to address their needs.

3. Choose a nursing theorist to review. How have you seen the application of this nursing theorist’s work in your practice?

Suggested answer: Student answers will vary, depending on their personal experience and practice area. For example, students may discuss how the diagnosis of a chronic illness such as diabetes in an adolescent would require the adolescent to cope with the illness and the demands of treatment, life-style changes, and the family coping as the adolescent is supported in their need to address the chronic health needs. Another example could be how Orem’s self-care deficit theory could apply to the care of the patient who suffers from hypertension but struggles to make the necessary life-style changes, such as eating less processed and fried foods, adopting an exercise regimen, and losing weight, in order to reduce the hypertension.

4. Read the AACN’s DNP Essential I: Scientific Underpinnings for Practice. It can be found in the document located at: <https://www.aacnnursing.org/Portals/42/Publications/DNPEssentials.pdf>.

Essential I lists the principles on which nursing is focused. What do these mean to you?

Suggested answer: These answers will vary for the individual student. The answers should be based on the fact that principles and laws govern the life-process, well-being, and optimal functioning of human beings; that there are patterns of human behavior that interact with the environment in normal life events and critical life situations; that nursing actions or processes effect positive changes; and that humans are in continuous interaction with their environment. For example, students could relate how it is important to recognize that people who are in a health crisis may have similar patterns of behavior as they begin to deal with the crisis and cope with the impact it has on their lives. This realization means that nurses can study these behavior patterns for a deeper understanding of patient responses to crisis. This deeper understanding allows nurses to respond therapeutically and support the individual and their family as they face the crisis. Another example could be that students realize their actions can effect a positive change in the community. If the nurse uses his or her knowledge to assist in revitalizing a community park by advocating for areas that allow for those with mobility impairments to participate, then the nurse has brought about positive change through action.

5. How does the understanding of organizational structure assist the doctorally prepared nurse to improve bedside care to patients?

Suggested answer: An understanding of organizational structure assists the doctorally prepared nurse to recognize the impact of systems on patient safety. For example, nurses who understand organizational structure can assist in exploring the root causes of and solutions to errors that occur in the healthcare environment. Additionally, the doctoral prepared nurse can assist in applying resources to error reduction and collaborate with other discipline areas to further support error prevention. Familiarity with organizational structure assists the doctorally prepared nurse to understand the role nursing has in healthcare systems and maximize the effectiveness of the nurse’s role. This organizational knowledge assists to promote change for improving healthcare.