



# ARIZONA EDUCATOR PROFICIENCY ASSESSMENTS™



## STUDY GUIDE

### 18 Health

**This AEPA test was replaced by a NES test.  
Examinees may continue to find this study guide useful as they  
prepare for the NES, as the previous AEPA test may have  
covered objectives and content similar to the NES test.**

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## STUDY GUIDE ORDER FORM



## **PART 1: GENERAL INFORMATION ABOUT THE AEPA™ AND TEST PREPARATION**

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Part 1 of this study guide is contained in a separate PDF file. Click the link below to view or print this section:

[General Information About the AEPA and Test Preparation](#)



## PART 2: FIELD-SPECIFIC INFORMATION

### Field 18: Health

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#### INTRODUCTION

This section includes a list of the test objectives, practice questions, and an answer key for the selected-response questions.

**Test objectives.** As noted earlier, the test objectives are broad, conceptual statements that reflect the knowledge, skills, and understanding an entry-level educator needs to practice effectively in Arizona schools. The list of test objectives for each test field is the *only* source of information about what a specific test will cover and therefore should be studied carefully.

**Practice questions.** The practice selected-response questions and practice performance assignments included in this section are designed to give you an introduction to the nature of the questions included in the AEPA tests. The practice questions represent the various types of questions you may expect to see on an actual test; however, they are *not* designed to provide diagnostic information to help you identify specific areas of individual strengths and weaknesses or to predict your performance on the test as a whole.

When you answer the practice questions, you may wish to use the sample answer sheet and sample Written Response Booklet provided in Part 1 to acquaint yourself with these materials. Use the answer key located after the practice questions to check your answers. Sample responses are provided immediately following each written performance assignment. The sample responses in this guide are for illustrative purposes only. Your written response should be your original work, written in your own words, and not copied or paraphrased from some other work.

To help you identify how the test objectives are measured, the objective statement to which the question corresponds is listed in the answer key. When you are finished with the practice questions, you may wish to go back and review the entire list of test objectives and descriptive statements for your test field.

# TEST OBJECTIVES

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## Field 18: Health

### SUBAREAS:

1. Personal Health
2. Healthy Interpersonal Relationships
3. Community Health
4. Accessing Health-Related Information
5. Health-Related Skills and Behaviors
6. Health-Related Physical Fitness

### PERSONAL HEALTH

**0001 Understand human growth and development and human body systems, and their relationships to personal health and disease prevention.**

For example: stages and processes of human growth and development; characteristics and processes of aging; the location and function of body systems; the effects of various factors (e.g., family history, age, disease, behavioral choices, exercise) on body systems and development; interdependence among body systems; and the relationship of personal health to body systems and their functioning.

**0002 Understand the role of nutrition in the promotion of personal health.**

For example: the nature, importance, and sources of various nutrients (e.g., carbohydrates, vitamins, water); dietary choices and planning (e.g., the food pyramid); proper food preparation and handling techniques; relationships between diet and the prevention of disease; issues related to ideal weight and body composition (e.g., weight control, problems with food, physical activity levels); problems of malnutrition in relation to population distribution, economics, food consumption, and politics; and differing nutritional needs for various populations.

**0003 Understand types of disease, the epidemiology of disease, and the role of prevention in the promotion of personal health.**

For example: types of diseases (e.g., chronic, degenerative, communicable), their causes, their characteristics, and methods for detecting and preventing them; interrelationships among the individual, the environment, and disease; how primary and secondary prevention activities promote health; and the role of the body's natural defense mechanisms and genetic factors in preventing or causing disease.

**0004 Understand the relationships of drug use, misuse, and abuse to personal health.**

For example: the classification of drugs (including alcohol and tobacco); uses and benefits of drugs for medical purposes; heritage-based and religious influences on the use of drugs and alternative medicines; the physiological effects of various classes of drugs; factors that contribute to the misuse and abuse of tobacco, alcohol, and other drugs (e.g., stimulants, hallucinogens, marijuana, inhalants, steroids); health risks and family, economic, and social costs of self-medication and substance abuse; the nature and prevention of chemical dependency; and intervention and treatment for chemical dependency.

**0005 Understand the nature of mental and emotional health and their relationship to personal health.**

For example: the development of mental and emotional health, including issues related to self-worth and resiliency; factors that affect mental and emotional health; the interrelationships among the mental, emotional, psychological, and physical realities that occur throughout the life cycle; sources, signs, and symptoms of stress and positive techniques for managing stress; the nature, stages, and categories of depression; risk factors related to suicide; and appropriate intervention strategies.

**HEALTHY INTERPERSONAL RELATIONSHIPS****0006 Understand factors that affect relationships within families.**

For example: the variety of families and family structures; the nature of healthy relationships within families; ways in which families in the United States accommodate and care for family members in various stages of life; how the family and family relationships affect personal health; and strategies and behaviors that promote healthy family relationships.

**0007 Understand the nature of peer relationships and strategies for promoting healthy peer relationships.**

For example: the stages of social development; characteristics and benefits of peer relationships; techniques for developing and maintaining friendships; the dynamics of groups (e.g., teams, clubs); how peers and peer relationships affect personal health; effects of peer pressure and strategies for responding to peer pressure in a positive manner; the nature and importance of social support systems; strategies for developing cooperative relationships; effective approaches to leadership and ways to follow through to accomplish group goals; and benefits of maintaining healthy peer relationships.

**0008 Understand human sexuality and family planning.**

For example: characteristics of sexual development; human reproduction (e.g., conception, gestation, birth); responsible sexual behavior and choices, including decision making, abstinence, and refusal skills; factors that affect decisions about sexual behavior (e.g., norms, peer pressure, influence of alcohol and other drugs); prevention of pregnancy and sexually transmitted diseases; family planning; and parenting responsibilities and skills.

**0009 Understand the nature of conflict and strategies for promoting healthy resolutions between parties facing conflict.**

For example: physiological responses to conflict; common sources of conflict and methods of conflict resolution (e.g., mediation); strategies for developing self-control; the nature and effects of violence and methods of avoiding violence; types of hurtful interpersonal behaviors (e.g., ridicule, sexual abuse, exploitation, dating violence, unwanted sexual contact, harassment) and ways of avoiding or confronting these behaviors in a proactive manner (e.g., refusal, negotiation, collaboration); strategies for dealing with individuals exhibiting dangerous behaviors; and skills for self-protection from crime and assault.

**0010 Understand the value of similarities and differences and the promotion of healthy interpersonal relationships.**

For example: respect and tolerance for various heritages and lifestyles; the nature of assumptions and their effects on individuals and groups; the effects of intolerance and strategies for avoiding or responding to intolerance; appropriate methods for promoting individuals' tolerance and valuing similarities and differences (e.g., participation in group activities with individuals from diverse backgrounds); and how heritages enrich and challenge health behaviors.

**COMMUNITY HEALTH****0011 Understand environmental factors that affect health.**

For example: basic concepts of environmental science; the sources and potential health effects of various environmental factors (e.g., air, water, and noise pollution; hazardous wastes; radiation; biological agents); how environmental health affects community health; the functions of local, state, and federal resources in addressing health issues; and methods for minimizing or coping with health risks in the environment.

**0012 Understand important current health issues and their effects on community health.**

For example: issues involving access to and availability of health care (e.g., immunizations, family planning); how public health policies, safety legislation, government regulations, research, and medical advances influence health promotion and disease prevention; issues related to confidentiality (e.g., drug testing, HIV testing, crisis counseling); relationships between health and population density; factors that inhibit the promotion of community health (e.g., economic issues, opposition by special interest groups); and methods used to analyze health issues and make decisions that promote community health.

**0013 Understand issues and procedures involved in the promotion of safety and accident prevention.**

For example: common causes and effects of accidents; behaviors that contribute to unintentional injuries (e.g., use of alcohol and other drugs, fatigue); strategies for identifying and avoiding dangerous situations; strategies for survival in adverse environmental situations; methods of preventing various types of accidents, including injuries associated with physical fitness development; and methods of promoting safety, including in physical activity settings.

**0014 Understand procedures used to provide care in medical emergency situations.**

For example: skills in identifying a medical emergency; steps to take in an emergency (e.g., calling for an ambulance); basic first-aid procedures in various situations; procedures for cardiopulmonary resuscitation (CPR); and universal precautions and procedures that protect the safety of the caregiver (e.g., wearing gloves, avoiding contact with body fluids).

**ACCESSING HEALTH-RELATED INFORMATION****0015 Understand reliable sources of health-related information.**

For example: identification of appropriate scientific sources of health-related information (e.g., libraries, health agencies, health practitioners, computerized databases); strategies for determining the reliability of different sources of health information (e.g., family members, peers, school, community agencies); the roles of various types of health agencies (e.g., American Cancer Society, American Medical Association, Centers for Disease Control and Prevention, local clinics and prevention centers) in providing information; and strategies for maintaining health literacy as advances occur.

**0016 Understand media messages and their effects on health-related decisions.**

For example: application of skills for critically analyzing health-related media messages; common advertising techniques used for health products and services; the effects of media advertising (e.g., television, radio, magazine) and other media (e.g., movies, videos, popular music) on personal, family, and community attitudes toward health-related issues (e.g., body image, self-perception); differences in the goals of advertisers and health advocates; and methods of effectively using media for health promotion.

**0017 Understand the use of wise consumer practices in relation to health-related purchases.**

For example: interpretation of food labels; recognition of how to make informed food choices based on particular needs (e.g., low fat, low sodium, adequate nutrition on a limited budget); analysis of claims related to food (e.g., "organically grown," "lower in fat"); ways to distinguish health products and practices that are founded on sound scientific research from those that are not; and factors that influence health-related purchases (e.g., health club membership, personal fitness equipment).

**0018 Understand methods of selecting, accessing, and managing health care.**

For example: characteristics, cost, and accessibility of various health care delivery models; licensing and certification standards for health professionals; the roles of various medical and allied health professionals; the role of local, state, federal, and international resources in providing health services and protecting and informing consumers; the use of appropriate health care resources to meet specific health or medical needs; individual rights and responsibilities within the health care system; and the creation and maintenance of an active partnership with health care providers.

**HEALTH-RELATED SKILLS AND BEHAVIORS****0019 Understand the development of problem-solving, decision-making, goal-setting, and critical-thinking skills and their use in developing, implementing, and evaluating a plan of action with respect to health-related issues.**

For example: activities that promote problem-solving, decision-making, goal-setting, and critical-thinking skills; application of these skills in various health-related contexts, including those that require collaborative decision making; consideration of short- and long-term effects of health-related decisions; and relationships between decision making and personal and community health.

**0020 Understand the development and use of self-directed learning with respect to health-related issues.**

For example: strategies and activities that promote a sense of personal responsibility for health and foster independent and responsible personal behaviors; the use of health literacy in addressing changing health needs; strategies for using self-directed learning in various health-related contexts (e.g., Internet, distance learning); and the promotion of qualities and skills for self-directed learning.

**0021 Understand the development and use of health advocacy and communication skills.**

For example: the use of oral, written, graphic, and technological media to convey ideas and research findings about health-related issues; the role of communication in maintaining health and healthy interpersonal relationships in various contexts; strategies that encourage positive interpersonal interactions and civil expression; the importance of listening skills and body language in the communication process; methods for communicating care, consideration, and respect for self and others to enhance health; and methods for promoting and using communication skills (e.g., negotiation and refusal skills).

**0022 Understand the development and use of risk-assessment skills with respect to health-related issues.**

For example: the effect of personal behaviors on the functioning of body systems; strategies and activities that promote self-assessment of behavioral risk factors; recognition of how personal risk factors can be reduced (e.g., cessation of smoking, stress management); consequences of responsible and risky behaviors throughout the life cycle; ways to assess potentially dangerous outcomes and consequences of participation in physical activities; and strategies for making health-related decisions based on assessment of the risks and benefits associated with various choices.

**HEALTH-RELATED PHYSICAL FITNESS****0023 Understand the role of physical fitness in the promotion of personal health.**

For example: the concept of wellness; how health-related physical fitness contributes to lifelong health and wellness; ways of achieving physical fitness; the benefits of regular and lifelong exercise for personal growth and fitness; ways in which activity participation patterns will change throughout life; and the nature of sleep and rest and their relationship to health.

**0024 Understand components of physical fitness and principles of training.**

For example: basic components of physical fitness (e.g., strength, endurance, flexibility) and principles of training (e.g., overload, specificity); the benefits of aerobic versus anaerobic conditioning; the short- and long-term effects of physical activity on the cardiorespiratory, muscular, skeletal, neural, and endocrine systems and analysis of the interaction of these systems in producing movement; positive and negative factors that affect physical fitness and performance (e.g., steroid abuse, nutrition); and potential health risks and injury prevention techniques associated with exercise and training (e.g., using warm-up and cool-down exercises).

**0025 Apply knowledge of movement principles and techniques, skills, organizational strategies, and safety practices for a variety of physical activities.**

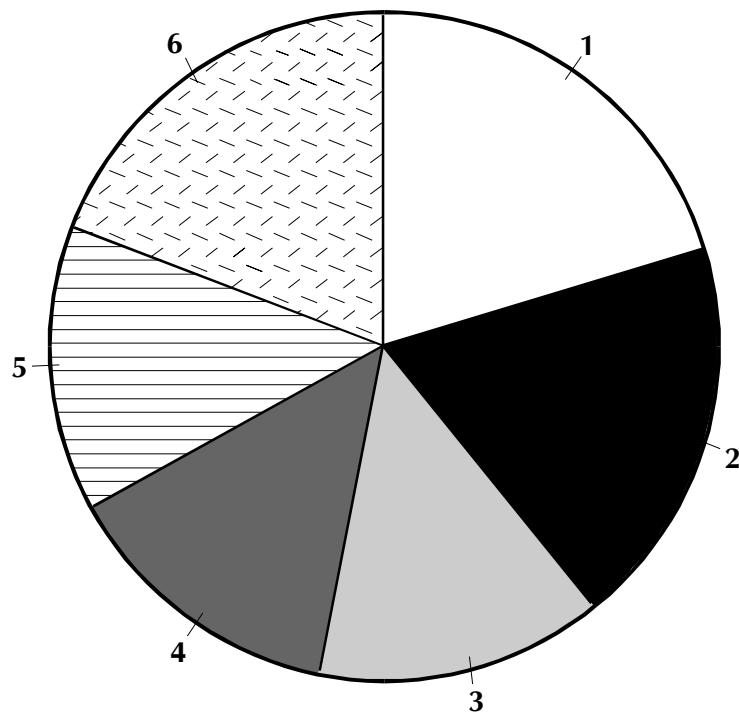
For example: principles of movement (e.g., balance, force, speed); manipulative, locomotor, and nonlocomotor skills; techniques, skills, activities, skill progression, organizational strategies, etiquette, safety practices, and proper use of equipment for a variety of movement forms (e.g., gymnastics, dance, aquatics, individual sports, dual sports, team sports, recreational activities, outdoor pursuits); techniques for assessing physical activity skills; activities appropriate for various developmental levels and purposes; and methods for selecting physical activities based on individual interest, meaning, and fulfillment.

**0026 Understand the process of developing a personal wellness program that meets individual needs.**

For example: methods for establishing, achieving, and maintaining personal health goals for lifelong health enhancement and wellness; techniques for designing a personal fitness program based on personal health and fitness goals, an understanding of training principles, individual skill levels, and resource availability; individual requirements for physical activity prescriptions concerning the mode, intensity, duration, frequency, and progression of activities; methods for self-assessment of health-related physical fitness and interpretation of test scores; health-related physical fitness standards; and comparison of safe and risky exercises and safe exercise alternatives.

**0027 Understand behavioral skills that are essential to maintaining a physically active lifestyle and that promote effective interactions in physical activity settings.**

For example: attitudes associated with regular participation in physical activity and/or fitness development activities; time-management skills associated with regular physical activity participation; common barriers to regular activity participation and methods for overcoming these barriers; self-efficacy and self-esteem as related to physical activity and the ability to use self-management skills necessary for developing both; self-initiated behaviors that promote personal and group success in activity settings; the importance of teamwork, cooperation, leadership, adherence to rules, and respect for similarities and differences; and behaviors that promote access for all individuals with varying needs in physical activities.

**DISTRIBUTION OF SELECTED-RESPONSE ITEMS ON THE TEST FORM**

**Approximate Percentage  
of Selected-Response  
Items on Test Form**

<b>Subarea</b>		
<input type="checkbox"/>	1. Personal Health	19%
<input type="checkbox"/>	2. Healthy Interpersonal Relationships	18%
<input type="checkbox"/>	3. Community Health	15%
<input type="checkbox"/>	4. Accessing Health-Related Information	15%
<input type="checkbox"/>	5. Health-Related Skills and Behaviors	15%
<input type="checkbox"/>	6. Health-Related Physical Fitness	18%

# PRACTICE QUESTIONS

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## Field 18: Health

1. Chris is a vegetarian. In planning meals, it is most important for Chris to use care in selecting foods so that the overall diet will include:
  - A. saturated fats.
  - B. high levels of carbohydrates.
  - C. macronutrients.
  - D. all essential amino acids.
  
2. A four-year-old child has a bacterial ear infection that is being treated with an antibiotic. However, the infection does not clear up. Which of the following provides the best explanation for this result?
  - A. The ear infection is caused by a strain of bacteria that is resistant to the antibiotic being used.
  - B. The child's immune system is not yet developed enough to mount an effective immune response.
  - C. The child's body is metabolizing the antibiotic before it can reach the site of infection.
  - D. The antibiotic is breaking down the antibodies produced by the child's own immune system.
  
3. A twelve year old lives with her parents and grandparents. All family members are healthy and active. This type of family structure is most likely to provide which of the following benefits to the family?
  - I. decreased need for social relationships outside the family
  - II. increased emotional support for family members
  - III. increased flexibility in family routine
  - IV. decreased parental responsibility for decision making
  - A. I and III only
  - B. I and IV only
  - C. II and III only
  - D. II and IV only

4. Which of the following strategies used by parents and caregivers would be most effective in promoting nonprejudicial attitudes in their children?

- A. emphasizing the positive qualities of individuals from other heritages
- B. focusing on the similarities, rather than the differences, among heritages
- C. encouraging their children to be involved in organizations that promote heritage-based activities
- D. serving as role models by demonstrating appreciation for people of all backgrounds

5. The effects of environmental hazards such as air pollution and soil contamination from pesticides are often not easily apparent because:

- A. illnesses caused by such hazards tend to develop gradually over a period of time.
- B. exposure to such hazards generally is easy to avoid.
- C. such hazards primarily affect animal populations rather than human populations.
- D. such hazards generally can be cleaned up quickly and effectively.

6. Lack of affordable health care creates serious problems mainly because high costs and limited availability of health care:

- A. promote abuse of over-the-counter drugs.
- B. diminish confidence in the care provided by medical professionals.
- C. reduce the use of preventive care and the early detection of disease.
- D. discourage people from seeking restitution for injuries caused by malpractice.

7. A health advocacy group released a report on the high levels of saturated fat in oils used to make movie-theater popcorn. Public response to this highly publicized report induced most theaters to switch to oils with less saturated fat. This best illustrates how:

- A. some health advocacy groups tend to jump to conclusions before performing adequate scientific research.
- B. the media can be used to promote health awareness in a broad audience.
- C. lack of adequate health knowledge makes people susceptible to persuasion techniques.
- D. the media can alter public attitudes by sensationalizing stories.

8. An individual who feels uncomfortable with his or her choice of a healthcare provider is most likely to respond by:

- questioning the provider's medical advice.
- taking longer to recuperate after illnesses or surgery.
- hesitating to seek medical care.
- having increased medical complaints.

9. Which of the following is generally the best strategy for initiating interpersonal communication with a person whose nonverbal cues and behavior indicate that he or she is emotionally upset?

- Deliberately misread the person's feelings to allow the person to correct your interpretation and thus gain control of the situation.
- Quickly assess the person's feelings based on his or her nonverbal cues and purposefully identify those feelings for the person.
- Respond to the person with body language similar to his or her own to show empathy before engaging in conversation.
- Describe your perceptions of the person's nonverbal cues and ask him or her to verify the accuracy of those perceptions.

10. Which of the following is likely to be the most effective way to prompt teenagers to consider the implications of contracting HIV and developing AIDS?

- providing them with articles that list common physical symptoms of AIDS and the medical treatments that are commonly used
- having an individual with HIV/AIDS talk frankly with the teenagers about his or her experience
- showing them tables and graphs that indicate the number of HIV/AIDS cases broken down by age group
- describing the typical modes of HIV transmission and precautions that can be taken to prevent the spread of the virus

11. Which of the following is most likely to be a primary benefit of following a personal wellness plan throughout life?

- The need for routine medical checkups will be lessened.
- The frequency and severity of certain types of illnesses will be decreased.
- The rate of the body's physiological response to stress will be slower.
- The efficiency with which the body absorbs nutrients from digested food will be increased.

12. Use the information below to answer the question that follows.

A ninth grader who wishes to improve cardiovascular endurance and decrease body fat has devised the following personal exercise plan.

**Exercise Plan**

**Frequency of Workout:** four days per week

**Intensity of Workout:** moderate

**Workout Components:**

1. **Warm-up** (5 minutes): brisk walking or jogging in place followed by static stretching
2. **Aerobic Workout** (15 minutes): bicycling or swimming
3. **Cool-down** (5 minutes): walking (in or out of water) followed by stretching and flexibility exercises

Which of the following changes would be most appropriate to suggest for increasing the effectiveness of this fitness plan?

- A. Increase the duration of the aerobic portion of the workout.
- B. Decrease the intensity and duration of the cool-down activity.
- C. Increase the frequency of the entire workout.
- D. Stretch before, not after, the warm-up activity.

Below are the directions for the Health performance assignment.

### **DIRECTIONS FOR THE PERFORMANCE ASSIGNMENT**

This section of the test consists of a performance assignment. **The assignment can be found on the next page.** You are asked to prepare a written response of approximately 2–3 pages on the assigned topic. You should use your time to plan, write, review, and edit your response for the assignment.

Read the assignment carefully before you begin to work. Think about how you will organize your response. You may use any blank space in this test booklet to make notes, write an outline, or otherwise prepare your response. **However, your score will be based solely on the version of your response written in Written Response Booklet B.**

As a whole, your response must demonstrate an understanding of the knowledge and skills of the field. In your response to the assignment, you are expected to demonstrate the depth of your understanding of the content area through your ability to apply your knowledge and skills rather than merely to recite factual information.

Your response will be evaluated based on the following criteria.

- **PURPOSE:** the extent to which the response achieves the purpose of the assignment
- **SUBJECT MATTER KNOWLEDGE:** accuracy and appropriateness in the application of subject matter knowledge
- **SUPPORT:** quality and relevance of supporting details
- **RATIONALE:** soundness of argument and degree of understanding of the subject matter

The performance assignment is intended to assess subject knowledge content and skills, not writing ability. However, your response must be communicated clearly enough to permit scorers to make a valid evaluation of your response according to the criteria listed above. Your response should be written for an audience of educators in this field. The final version of your response should conform to the conventions of edited American English. This should be your original work, written in your own words, and not copied or paraphrased from some other work.

Be sure to write about the assigned topic. Please write legibly. You may not use any reference materials during the test. Remember to review your work and make any changes you think will improve your response.

Below is the scoring scale for the Health performance assignment.

**SUBJECT TESTS—PERFORMANCE ASSIGNMENT SCORING SCALE**

Score Point	Score Point Description
4	<p><b>The "4" response reflects a thorough knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is fully achieved.</li> <li>• There is a substantial, accurate, and appropriate application of subject matter knowledge.</li> <li>• The supporting evidence is sound; there are high-quality, relevant examples.</li> <li>• The response reflects an ably reasoned, comprehensive understanding of the topic.</li> </ul>
3	<p><b>The "3" response reflects an adequate knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is largely achieved.</li> <li>• There is a generally accurate and appropriate application of subject matter knowledge.</li> <li>• The supporting evidence is adequate; there are some acceptable, relevant examples.</li> <li>• The response reflects an adequately reasoned understanding of the topic.</li> </ul>
2	<p><b>The "2" response reflects a limited knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is partially achieved.</li> <li>• There is a limited, possibly inaccurate or inappropriate, application of subject matter knowledge.</li> <li>• The supporting evidence is limited; there are few relevant examples.</li> <li>• The response reflects a limited, poorly reasoned understanding of the topic.</li> </ul>
1	<p><b>The "1" response reflects a weak knowledge and understanding of the subject matter.</b></p> <ul style="list-style-type: none"> <li>• The purpose of the assignment is not achieved.</li> <li>• There is little or no appropriate or accurate application of subject matter knowledge.</li> <li>• The supporting evidence, if present, is weak; there are few or no relevant examples.</li> <li>• The response reflects little or no reasoning about or understanding of the topic.</li> </ul>
U	<p><b>The response is unrelated to the assigned topic, illegible, primarily in a language other than English, not of sufficient length to score, or merely a repetition of the assignment.</b></p>
B	<p><b>There is no response to the assignment.</b></p>

### Practice Performance Assignment

**13. Read the information below; then complete the exercise that follows.**

Recently, following a day at work, almost 300 employees in a large office building became ill. They reported symptoms of headaches, nausea, vomiting, and diarrhea. Supervisors suspect that these workers may be suffering from food poisoning, which may have originated in the building's cafeteria. On the menu at the cafeteria that day was chicken noodle casserole, rolls, green salad, and oatmeal cookies.

Using your knowledge of health, write an essay in which you:

- identify two common food-borne pathogens that can cause the symptoms presented by these employees;
- identify the menu items that could have been a source of each of the pathogens you identified; and
- discuss the steps that should be taken to determine the source of contamination in this situation and prevent contamination in the future.

## Sample Performance Assignment Response: Score Point 4

Although food poisoning can be chemical or bacterial in origin, the most common types are caused by bacteria. Two common types of bacterial food poisoning are salmonella and E. coli. Either of these pathogens could have caused the symptoms presented by the affected employees in the office building. In addition, either of these pathogens could have been transmitted to the employees through the cafeteria food.

Salmonella causes illness through contaminated food or water. E. coli can be spread through water, food, or insects, such as flies. Several items on the cafeteria menu could have been contaminated with E. coli or salmonella. First, chicken can be contaminated with dangerous levels of these pathogens that can result from improper handling or poor sanitation at the chicken processing plant at which it originated. If the chicken is not refrigerated properly in the cafeteria and/or is not cooked thoroughly, the bacteria will continue to multiply. Another ingredient in the chicken-noodle casserole-milk could also be the source of an E. coli contamination. If eggs were used in the oatmeal cookies, the cookies could even be the source of the pathogens, if the cookies were not thoroughly cooked. E. coli and salmonella will be killed if food is cooked to a high enough temperature, but if food is not cooked thoroughly or is not held at the proper temperature, the bacteria will multiply. Dangerous levels of E. coli or salmonella can grow when a dish such as the chicken-noodle casserole is not held at a high enough temperature to prevent bacterial growth.

In addition, either pathogen could have been spread to any of the menu items through cross-contamination. If work surfaces, cutting boards, utensils, and cafeteria staff's hands were not washed regularly with hot, soapy water, either E. coli or salmonella would have the opportunity to multiply on those surfaces and be spread to other foods that come in contact with those surfaces.

To determine the source of contamination in this situation, public health officials would have to interview many, if not all, of the people who were infected. They would need to try to determine whether these people ate in the cafeteria that day, what they ate and drank, and whether they have anything else in common (such as a coffee shop where they ate breakfast). If it is determined that all or nearly all of the infected people ate the same things in the cafeteria that day, the public health officials should get samples of those foods and test them for contamination.

Once the menu item that was the source of the pathogens is found, the public health officials can try to trace how the food got contaminated so that they can prevent further outbreaks in the future. They should examine the cafeteria kitchen for proper sanitation and food-safety procedures, including the temperatures at which the refrigerators, freezers, and chafing dishes hold food. Any procedures the cafeteria is following (or not following) that can cause contamination should be changed to meet sanitary standards. The public health officials

*(continued on next page)*

**Sample Performance Assignment Response: Score Point 4 (*continued*)**

should also investigate the sanitary conditions of the sources of the ingredients in the contaminated foods and the transportation systems used to get those ingredients to the cafeteria. It is possible that the contamination occurred as a result of unsanitary conditions at the processing plant or as a result of poor refrigeration in the delivery trucks. Again, these unsanitary or unsafe practices would have to be remedied to prevent further infection in the future at this cafeteria and other places where these ingredients are used.

# ANSWER KEY

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## Field 18: Health

Question Number	Correct Response	Objective
1.	<b>D</b>	Understand the role of nutrition in the promotion of personal health.
2.	<b>A</b>	Understand types of disease, the epidemiology of disease, and the role of prevention in the promotion of personal health.
3.	<b>C</b>	Understand factors that affect relationships within families.
4.	<b>D</b>	Understand the value of similarities and differences and the promotion of healthy interpersonal relationships.
5.	<b>A</b>	Understand environmental factors that affect health.
6.	<b>C</b>	Understand important current health issues and their effects on community health.
7.	<b>B</b>	Understand media messages and their effects on health-related decisions.
8.	<b>C</b>	Understand methods of selecting, accessing, and managing health care.
9.	<b>D</b>	Understand the development and use of health advocacy and communication skills.
10.	<b>B</b>	Understand the development and use of risk-assessment skills with respect to health-related issues.
11.	<b>B</b>	Understand the role of physical fitness in the promotion of personal health.
12.	<b>A</b>	Understand the process of developing a personal wellness program that meets individual needs.