



1. While attending an international nursing conference, many discussions and break-out sessions focused on the World Health Organizations (WHO) views on health. Of the following comments made by nurses during a discussion session, which statements would be considered a good representation of the WHO definition? Select all that apply.
 - A) Interests in keeping the elderly population engaged in such activities as book reviews and word games during social time.
 - B) Increase in the number of chair aerobics classes provided in the skilled care facilities.
 - C) Interventions geared toward keeping the elderly population diagnosed with diabetes mellitus under tight blood glucose control by providing in-home cooking classes.
 - D) Providing transportation for renal dialysis patients to and from their hemodialysis sessions.
 - E) Providing handwashing teaching sessions to a group of young children.
2. A community health nurse is teaching a group of recent graduates about the large variety of factors that influence an individual's health or lack thereof. The nurse is referring to *the Healthy People 2020* report from the U.S. Department of Health and Human Services as a teaching example. Of the following aspects discussed which would be considered a determinate of health that is outside the focus of this report?
 - A) The client has a diverse background by being of Asian and Native American descent and practices various alternative therapies to minimize effects of stress.
 - B) The client has a family history of cardiovascular disease related to hypercholesterolemia and remains noncompliant with their treatment regime.
 - C) The client has a good career with exceptional preventative healthcare benefits.
 - D) The client lives in an affluent, clean, suburban community with access to many healthcare facilities.
3. A member of the health care team is researching the etiology and pathogenesis of a number of clients who are under his care in a hospital context. Which of the following aspects of clients' situations best characterizes pathogenesis rather than etiology?
 - A) A client who has been exposed to the *mycobacterium tuberculosis* bacterium.
 - B) A client who is has increasing serum ammonia levels due to liver cirrhosis.
 - C) A client who was admitted with the effects of methyl alcohol poisoning.
 - D) A client with multiple skeletal injuries secondary to a motor vehicle accident.
4. A new myocardial infarction patient requiring angioplasty and stent placement has arrived to their first cardiac rehabilitation appointment. In this first session, a review of the pathogenesis of coronary artery disease is addressed. Which statement by the patient verifies to the nurse that he/she has understood the nurse's teachings about coronary artery disease?
 - A) "All I have to do is stop smoking and then I won't have any more heart attacks."
 - B) "My artery was clogged by fat so I will need to stop eating fatty foods like French fries every day."

- C) "Sounds like this began because of inflammation inside my artery that made it easy to form fatty streaks which lead to my clogged artery."
 - D) "If you do not exercise regularly to get your heart rate up, blood pools in the veins causing a clot which stops blood flow to the muscle and you have a heart attack."
5. A 77 year old man is a hospital inpatient admitted for exacerbation of his chronic obstructive pulmonary disease (COPD), and a respiratory therapist (RT) is assessing the client for the first time. Which of the following aspects of the patient's current state of health would be best characterized as a symptom rather than a sign?
- A) The patient's oxygen saturation is 83% by pulse oximetry.
 - B) The patient notes that he has increased work of breathing when lying supine.
 - C) The RT hears diminished breath sounds to the patient's lower lung fields bilaterally.
 - D) The patient's respiratory rate is 31 breaths per minute.
6. Which of the following situations would be classified as a complication of a disease or outcome from the treatment regime? Select all that apply.
- A) Massive pulmonary emboli following diagnosis of new onset atrial fibrillation.
 - B) Burning, intense incision pain following surgery to remove a portion of colon due to intestinal aganglionosis.
 - C) Development of pulmonary fibrosis following treatment with Bleomycin, an antibiotic chemotherapy agent used in treatment of lymphoma.
 - D) Gradual deterioration in ability to walk unassisted for a patient diagnosed with Parkinson's disease.
 - E) Loss of short-term memory in a patient diagnosed with Alzheimer's disease.
7. Laboratory testing is ordered for a male patient during a clinic visit for routine follow-up assessment of hypertension. When interpreting lab values, the nurse knows:
- A) A normal value represents the test results that fall within the bell curve.
 - B) If the lab result is above the 50% distribution, the result is considered elevated.
 - C) All lab values are adjusted for gender and weight.
 - D) If the result of a very sensitive test is negative, that does not mean the person is disease free.
8. The laboratory technologists are discussing the a new blood test that helps establish a differential diagnosis between shortness of breath with a cardiac etiology and shortness of breath with a respiratory/pulmonary etiology. A positive result is purported to indicate a cardiac etiology. The marketers of the test report that 99.8% of patients who have confirmed cardiac etiologies test positive in the test. However, 1.3 percent of patients who do not have cardiac etiologies for their shortness of breath also test positive. Which of the following statements best characterizes this blood test?
- A) Low validity; high reliability
 - B) High sensitivity, low specificity
 - C) High specificity; low reliability
 - D) High sensitivity; low reliability

9. As part of a screening program for prostate cancer, men at a senior citizen's center are having their blood levels of prostate-specific antigen (PSA) measured. Which of the following statements would best characterize high positive predictive value but low negative predictive value for this screening test?
- A) All of the men who had high PSA levels developed prostate cancer; several men who had low PSA levels also developed prostate cancer.
 - B) All of the men who had low PSA levels were cancer-free; several men who had high levels also remained free of prostate cancer.
 - C) Men who had low PSA levels also displayed false positive results for prostate cancer; men with high levels were often falsely diagnosed with prostate cancer.
 - D) The test displayed low sensitivity but high specificity.
10. A male international business traveler has returned from a trip to Indonesia. While there, he hired a prostitute for companionship and engaged in unprotected sex on more than one occasion. Unbeknownst to him, this prostitute harbored the hepatitis C virus. Upon return to the U.S., he exhibited no symptoms and returned to his usual activities. During this period of no outward symptoms, the disease would be classified as being in:
- A) The preclinical stage of disease.
 - B) Remission and unlikely to develop hepatitis C.
 - C) The clinical disease stage of hepatitis C.
 - D) The chronic phase of hepatitis C.
11. As of Nov. 1, 2012, there were a total of 10 confirmed cases of hantavirus infection in people who were recent visitors (mid-June to end of August, 2012) to Yosemite National Park. Three visitors with confirmed cases died. Health officials believe that 9 out of the 10 cases of hantavirus were exposed while staying in Curry Village in the Signature Tent Cabins. This is an example of:
- A) What the anticipated mortality rate would be if a family of five were planning to vacation in Yosemite National Park.
 - B) The prevalence of hantavirus one can anticipate if they are going to vacation in Yosemite National Park.
 - C) The low rate of morbidity one can expect while traveling to Yosemite National Park.
 - D) The incidence of people who are at risk for developing hantavirus while staying in Yosemite National Park.
12. A particular disease has a debilitating effect on the ability of sufferers to perform their activities of daily living, and is a significant cause of decreased quality of life. However, few people die as a result of the disease's direct effects. There are hundreds of thousands of Americans living with the disease but relatively few new cases in recent years. Which of the following statements best conveys an accurate epidemiological characterization of the disease?
- A) Low mortality; high morbidity; low prevalence; high incidence.
 - B) Low mortality; high morbidity; high incidence; low prevalence.
 - C) High mortality; low morbidity; high incidence; low prevalence.
 - D) High morbidity; low mortality; high prevalence, low incidence.

13. An epidemiologist is conducting a program of research aimed at identifying factors associated with incidence and prevalence of congenital cardiac defects in infants. The researcher has recruited a large number of mothers whose infants were born with cardiac defects as well as mothers whose infants were born with healthy hearts. The researcher is comparing the nutritional habits of all the mothers while their babies were in utero. Which of the following types of studies is the epidemiologist most likely conducting?
- A) Cohort study
 - B) Cross-sectional study
 - C) Case-control study
 - D) Risk factor study
14. A nurse practitioner is working in a crowded neighborhood where the population is primarily immigrants from China. The nurse has designed a research study to follow children from kindergarten to the age of 25. She is going to be looking at their diet, successful progression in school, health practices, and development of disease, to name a few items. This type of research is known as:
- A) Cohort study
 - B) Cross-sectional study
 - C) Case-control study
 - D) Epidemiological study
15. As part of a community class, student nurses are developing a class to teach expectant parents the importance of having their child properly secured in a child safety seat. During the class, the students are going to have a safety officer examine the car seats that the parents have installed in their vehicle. This is an example of which type of prevention?
- A) Primary prevention
 - B) Secondary prevention
 - C) Tertiary prevention
 - D) Prognosis enhancement
16. A multidisciplinary healthcare team operates a program aimed at the prevention, identification and treatment of diabetes on a large Indian reservation. Which of the following aspects of the program would be most likely to be classified as secondary prevention?
- A) Regularly scheduled wound dressing changes for clients who have foot ulcers secondary to peripheral neuropathy and impaired wound healing.
 - B) Teaching school children how a nutritious, traditional diet can lessen their chances of developing adult-onset diabetes.
 - C) Staffing a booth where community residents who are attending a baseball tournament can have their blood glucose levels checked.
 - D) Administering oral antihyperglycemic medications to clients who have a diagnosis of diabetes.

17. An occupational therapist conducts a group therapy program called MindWorks with older adults who have diagnoses of dementia and Alzheimer's disease. The goal of the group is to slow the cognitive decline of clients by engaging them in regular, organized mental activity such as reading maps and solving puzzles. How would the program most likely be characterized?
- A) Primary prevention
 - B) Secondary prevention
 - C) Tertiary prevention
 - D) Prognosis enhancement
18. The clinical educator of a hospital medical unit has the mandate of establishing evidence-based practice guidelines for the nursing care on the unit. Which of the following statements most accurately captures a guiding principle of the nurse's task?
- A) Evidence-based practice guidelines will be rooted in research rather than nurses' subjective practice preferences and experiences.
 - B) Guidelines are synonymous with systematic research reviews.
 - C) The need for continuity and standardization of guidelines will mean that they will be fixed rather than changeable.
 - D) The guidelines will combine individual expertise with external systematic evidence.
19. The neuroscience nursing unit has developed a set of step-by-step directions of what should occur if a nursing assessment reveals the patient may be exhibiting clinical manifestations of a cerebrovascular accident (CVA). Which of the following statements about clinical practice guidelines are accurate? Select all that apply.
- A) Step-by-step guidelines are usually developed and based primarily on "how it has always been done before."
 - B) The development of evidence-based practice guidelines require a research review from different studies to develop the most accurate diagnostic method to implement.
 - C) Once developed, practice guidelines only need to be reviewed if a national committee sends out an update on new research.
 - D) When developing a CVA set of step-by-step directions, the nursing unit should ask for assistance from experts in the neuroscience field. The potential users of the guidelines should pilot test it for further feedback.
 - E) A meta-analysis could be utilized to combine evidence from different studies to produce a more accurate diagnostic method.
20. A nurse is investigating the epidemiologic factors influencing breast cancer for women in a population. What information should the nurse include? Select all that apply.
- A) How cancer cells divide and multiply in breast tissue
 - B) The geographic location of women diagnosed with breast cancer
 - C) The currently known incidence and prevalence for this population
 - D) The age of women at the time of diagnosis
 - E) The number of women whose diagnosis was assisted by the use of mammography

21. A nurse researcher is interested in the natural history of a disease being studied. What should the nurse focus on to **best** understand the condition's natural history?
- A) Following client cases from initial diagnosis and throughout treatment
 - B) Examining outcomes across a wide-variety of treatment approaches
 - C) Focusing on clients who did not receive treatment for the condition
 - D) Interviewing clients for their first-hand experience with the condition
22. A clinical nurse specialist is interested in developing a research study focused on clients living with the sequelae of ischemic stroke. Which clients should the nurse include? Select all that apply.
The nurse should include clients with:
- A) aspiration pneumonia.
 - B) unilateral weakness.
 - C) dysphagia (difficulty swallowing).
 - D) falls.
 - E) vision changes.
23. A nurse is considering setting up a screening program for a specific health condition in a population. What characteristic of the condition would need to be true for the nurse to justify screening a population? The condition should:
- A) be asymptomatic at an early stage.
 - B) have a noninvasive diagnostic test available.
 - C) be curable with available treatment.
 - D) have a high mortality rate.
24. The nurse is questioning the validity of oxygen saturation readings from the new oximeters on the unit. Which action should the nurse take to **best** determine if the results from the oximeter are valid?
- A) Compare clients' results to measurements taken using arterial blood gas analyses.
 - B) Repeat the test on the same client to determine if the oximeter offers the same results.
 - C) Review the literature about this brand of oximeter provided by the company.
 - D) Compare the findings with all clients' results on the unit to determine if there is a trend in the results.
25. The public health nurse is designing a course about risk factors for various chronic illnesses. For risk factors about which chronic illness will the nurse consult the Framingham study?
- A) Cardiovascular disease
 - B) Breast cancer
 - C) Chronic obstructive pulmonary disease (COPD)
 - D) Type 2 diabetes mellitus

Answer Key

1. A, B, C, E
2. B
3. B
4. C
5. B
6. A, C
7. A
8. B
9. A
10. A
11. D
12. D
13. C
14. A
15. A
16. C
17. C
18. D
19. B, D, E
20. B, D
21. C
22. B, C, E
23. A
24. A
25. A

1. During a discussion on cellular components and their function, a student asked the instructor the purpose of messenger RNA (mRNA). Of the following, which is the most accurate answer?
 - A) To transport amino acids to the site of protein synthesis.
 - B) Acts as an inner nuclear support membranes for a rigid network of protein filaments that binds DNA to the nucleus.
 - C) Performs an active role of protein synthesis, where mRNA molecules direct the assembly of proteins on ribosomes to the cytoplasm.
 - D) Assists cells in forming neoplastic progression by altering the response of chromatin in the nuclear matrix.
2. The nurse is providing care for a client with a diagnosis of cirrhosis, and she notes that the client's sclerae are jaundiced. The nurse recalls that jaundice is a pigment that can accumulate in which part of the cell?
 - A) Nucleus
 - B) Cytoplasm
 - C) Golgi apparatus
 - D) Rough endoplasmic reticulum (ER)

3. A 14 year old female has been experiencing severe internal cramps in the region of the pelvis and weight loss. She has been admitted with rectal bleeding. The physician has diagnosed her with inflammatory bowel disease (IBD). She asks the nurse what causes this disease. Which pathophysiological basis will guide the nurses response to this adolescent?
 - A) Liver involvement in faulty glycogen stores.
 - B) Endoplasmic reticulum stress in the gastrointestinal system.
 - C) Oversecretion of insulin from the beta cells in the pancreas.
 - D) Infiltration of the gastrointestinal track by bacterial toxins.
4. A professor is teaching a group of students about the role of mitochondria within the cell. Which of the following statements is true of mitochondria?
 - A) They are the site of adenosine triphosphate (ATP) production.
 - B) The number of mitochondria in a cell is equal to the number of nuclei.
 - C) They are replicated within the smooth endoplasmic reticulum (ER).
 - D) Mitochondrial DNA is inherited patrilineally.
5. A patient has been diagnosed with a neurodegenerative disease called multiple sclerosis (MS). The physician explains to the patient that this disease may be caused by dysregulated apoptosis. Later that day, the patient asks the nurse what this means. The nurse should reply:
 - A) The cells around your nerves don't know how to die correctly.
 - B) The cytoplasm should neutralize the various apoptotic inhibitors but isn't working correctly.
 - C) Dysregulated apoptosis has caused an excessive rate of programmed cell death along the neuro-pathways.
 - D) There is an inappropriately low rate of apoptosis occurring within the cells.
6. A patient experiencing *immotile cilia syndrome* should be frequently assessed by the nurse for which priority complication?
 - A) Epistaxis resulting from loss of cilia in the nasal passageway.
 - B) Bronchiectasis due to interferences with clearance of inhaled bacteria along the respiratory tract.
 - C) Sterility caused by inability of sperm to swim downstream.
 - D) Inability to hear soft sounds related to kinocilium on the hair cells in the inner ear.
7. The nurse is explaining the workings of selective serotonin reuptake inhibitors to a client with a diagnosis of depression. Within the teaching, the nurse mentions that in the nervous system, the transmission of information by neurotransmitters is:
 - A) Synaptic signaling
 - B) Endocrine signaling
 - C) Autocrine signaling
 - D) Paracrine signaling

8. The nurse is teaching a group of colleagues about the cell division cycle as background to caring for oncology clients. Which of the following statements is true of the cell cycle?
- A) Some cells lack a G₀ phase.
 - B) Mitosis is a process that occurs in steps over one to two days.
 - C) The two broad phases of the cell cycle are mitosis and synthesis.
 - D) Non-dividing cells such as nerve cells are said to be in the S₀ phase.
9. A 62 year old male collapsed while unloading a truck of heavy sacks of feed for his cattle. When he arrived in the Emergency Department, blood gasses reveal a slightly acidic blood sample. The nurse caring for this patient is not surprised with this result based on which of the following pathophysiological rationales?
- A) The skeletal muscles are producing large amounts of lactic acid and release it into the bloodstream during heavy work/exercise.
 - B) During exercise, catabolism metabolism will break down stored nutrients and body tissues to produce energy.
 - C) Large amounts of free energy is released when ATP is hydrolyzed and then converted into adenosine diphosphate.
 - D) Within the mitochondria, energy from reduction of oxygen is used for phosphorylation of ADP to ATP.
10. The health caregiver is explaining the rationale for administering a hypotonic intravenous solution (lower concentration of solutes in its surroundings) to a client. Which of the following mechanisms of membrane transport most likely underlies this action?
- A) Facilitated diffusion
 - B) Active transport
 - C) Diffusion
 - D) Osmosis
11. A nurse is teaching a client with a recent diagnosis of diabetes about the roles that glucose and insulin play in the disease pathology and the fact that glucose must enter the body cell in order to provide energy for the client. The nurse knows that which of the following processes allows glucose to enter body cells?
- A) Osmosis
 - B) Facilitated diffusion
 - C) Active transport
 - D) Diffusion
12. A student asks the instructor about the origins of different tissues and their cellular origins during the process of development. Which of the instructor's following statements best describes the process of cell differentiation?
- A) "Cells of the hematopoietic system produce the appropriate body cells that are required at each stage of development."
 - B) "A single stem cell differentiates into approximately 200 different types of cells."

- C) "A fertilized ovum undergoes a series of divisions, yielding many different cell types."
 - D) "Cells differentiate into necessary body cells peaking after conception and ceasing near the time of birth."
13. A nurse is providing care for a client with a diagnosis of Crohn's disease. The nurse recognizes the fact that the disease involves the inflammation and irritation of the intestinal lining. Which of the following types of tissue is most likely involved in the client's pathology?
- A) Simple columnar epithelium
 - B) Glandular epithelium
 - C) Simple cuboidal epithelium
 - D) Stratified epithelium
14. During a crime scene investigation, the coroner confirms that rigor mortis has set in. This helps to confirm an approximate time of death. The forensic nurse can explain this process (rigor mortis) to a group of students based on the fact that:
- A) Troponin is being prevented from forming a cross-bridge between the actin and myosin.
 - B) The activated by ATP, cross-bridges become attached to the actin filament.
 - C) The myosin head catalyzes the breakdown of ATP to provide the energy need so that a cross-bridge can be formed.
 - D) At death, the body is unable to complete the actin/myosin cycle and release the coupling between the myosin and actin, creating a state of muscular contraction.
15. The homecare nurse is making a home visit to a 51 year old female client with a longstanding diagnosis of multiple sclerosis. The nurse knows that the muscle wasting and weakness associated with the disease process is ultimately manifested as a failure of what normal process in muscle tissue?
- A) The contraction of the epimysium.
 - B) The surrounding of fascicles by perimysium.
 - C) Thick myosin and thin actin filaments sliding over each other.
 - D) The contraction of fascicles within myofibrils.
16. A caregiver is working with a client who is having poorly controlled pain due to shingles. The associate pain travels to the client's nervous system via:
- A) Synapses
 - B) Axons
 - C) Afferent neurons
 - D) Efferent neurons
17. The nurse is administering a calcium channel blocker to a client with a cardiac dysrhythmia. For what side effect should the nurse assess?
- A) Constipation
 - B) Tachycardia