

## Answers and Explanations

1. C: There are five titles outlined in the ADA. Title I covers prohibition of discrimination in employment for those individuals with physical or mental disabilities. The other answers describe the content of Titles II (A), III (B), and IV (D). Title V covers insurance, defining exclusions, etc.
2. D: HIPAA covers all of the issues discussed in items A through C as well as a number of others, such as tax breaks for medical savings accounts, in its seven titles. However, the only reference in the Act to Medicare type plans (D) is that they must coordinate with other plans to prevent duplication of coverage.
3. A: Discontinuation of treatment by a health care provider merely because the patient has not paid in a timely manner would be considered a breach of contract. The other choices describe the three instances in which the provider can legally discontinue treatment. Choices C and D require the professional to send a notice describing the situation by certified mail with return receipt to the patient.
4. C: Under the doctrine of respondeat superior, the medical assistant's employer/provider (usually a doctor or some other professional) is responsible for and can be sued in instances of negligence by the employee. However, the medical assistant can also be sued, because they are considered responsible for not providing a reasonable standard of care. The patient (D) would bear no responsibility.
5. B: All of the given choices are types of torts, which are wrongful actions that culminate in injury to the other person (in this case, the patient). Battery (B) is the touching of a patient in manner to which they have not consented. Invasion of privacy (A) includes a number of situations in which a patient's privacy is invaded, such as releasing information about them without permission or failing to shield them properly during examination. Libel (C) and slander (D) are two types of defamation of character, which are false and malicious writing or speaking about someone, respectively.
6. D: The minors described in A, B, and C, as well as minors who are parents, are considered to be emancipated and are capable of signing their own consent. In most states, minors being treated for sexually transmitted diseases, as well as those who are pregnant or have a drug or alcohol addiction, can also sign their own consent, but in this case they are considered mature (not emancipated) minors.
7. A: A subpoena is a court-issued request for access to part or all of a patient's medical record. Unless public safety is involved, the basic requirement for record release to anyone is the patient's written consent (A). A court order (B) is sometimes also required when sensitive issues are involved, such as AIDS or other sexually transmitted diseases, mental illness, etc. Choices C and D refer to later processes during the discovery phase of litigation, dealing with oral and written testimony, respectively.
8. C: The time point most often used as the starting point for the statute of limitations on negligence is generally choice A, when the act occurred, but choices B and D are sometimes utilized. However, choice C, the date the litigant filed the claim, is not a valid starting point for the statute of limitations to apply.
9. B: When a health care provider or other professional observes an instance of suspected child abuse, they are legally required to report this to the police, social services agency, and parents, the

suspends the normal patient right to confidentiality (B). The right to privacy (A) is slightly different. The provider must still properly document the case (C) and provide the expected standard of care (D).

10. C: POLST stands for the Physician Orders for Life-Sustaining Treatment form, which is available in some configuration in the majority of states and is a type of living will or advance directive (C) for level of care in the near-death of a patient. A durable power of attorney (A) designates another individual for decisions regarding the patient's health care. PSDA (D) refers to the federal Patient Self-Determination Act, which is related in that it discusses Medicare/Medicaid payments and availability of advance directives in institutions. POLST forms are unrelated to the Good Samaritan laws (B).

11. C: Medical assistants are only allowed to do certain clinical procedures because they are not a licensed profession (C), like doctors and nurses, who must fulfill specified educational requirements and pass a state-administered examination. Many medical assistants choose to voluntarily become certified.

12. B: Ethics refers to the set of personal values that shape an individual's perceptions of right and wrong, which is different from morals (defined in choice A). Ethics are not laws defining acceptable behavior (C) or creeds to live by (D), although the latter generally are derived from ethics.

13. A: Bioethics is an overall term relating to all ethical matters pertaining to life and/or health care. The other responses describe particular situations in which bioethics might be invoked.

14. D: The AAMA Code of Ethics for medical assistants does not outline specific ways of dealing with certain situations (D), but it does expound five things that should be strived for. These five things include A, B, and C, as well as upholding the principles and disciplines of the profession, and taking part in further service activities related to the betterment of the community.

15. A: Not all states have legislation related to reporting of elder (60 years of age or older) or intimate partner abuse. All three types of abuse could potentially be sexual (B), physical (C), or emotional. Other types include neglect in cases of child or elder abuse, financial in cases of elder abuse, and sexual exploitation and incest in cases of child abuse. All types could also potentially involve a reportable criminal act (D), such as rape.

16. A: The provider cannot withhold treatment to an HIV-positive patient (C), patient confidentiality should be maintained (B), and any intimate partners notified (D). The provider cannot ethically deny treatment, therefore (A) is the correct answer.

17. B: All states currently allow abortion during the first trimester. Depending on the states, other time frames or situations may also apply. A health care provider is not required to perform abortions, however.

18. A: Therapeutic communication is distinguished from normal social communication in that it interjects empathy (A) toward the other person, not advice (B) or recommendations (C). A person effective at therapeutic communication is often knowledgeable about the process of communication (D), but that is not required.

19. C: Active listening requires the receiver to be attuned not only to what the other person is saying, but also to what they may be hinting at through body language or nonverbal

communication. Being alert and interested (A) without the other requirements does not constitute active listening, and quick responses defining corrective actions (D) are generally thought to be detrimental to communication.

20. B: According to references such as Legal Nurse Consulting Principles and Practice, effective verbal communication occurs when the message is complete, clear, concise, cohesive, and also courteously delivered. Confidence may or may not be a reflection of effectiveness.

21. B: There are cultural differences in what is considered a comfortable personal space, but generally in the United States between 1-1/2 and 4 feet is considered comfortable space for personal interaction with another individual. The other responses represent the personal spaces generally considered necessary for intimate communication (A), social communication (C), and in public spaces (D).

22. C: All of the listed responses are types of defense mechanisms, but C is the described mechanism. Sublimation (A) is diverting a socially unacceptable behavior into one that is socially acceptable. Repression (B) is subconsciously forgetting an event. Compensation (D) is disguising a real or imagined undesirable trait by overemphasizing one that is considered healthy or acceptable. Other types of defense mechanisms include regression, denial, displacement, rationalization, and undoing.

23. A: The most basic needs on the base of Maslow's hierarchy are those related to physiology and survival such as food, water, and air. Maslow describes five levels of needs. The listed responses represent levels two (B), three (C), and four (D). The fifth and final level is self-actualization, the achievement of one's potential.

24. C: A cultural broker is an intermediary or advocate for another person or cultural group. A cultural broker can act as a medical interpreter, but generally a family member is not the best choice because they may not comprehend the medical terminology. In this role, the cultural broker should never interview the patient independently (D), but rather act as a direct interpreter.

25. B: A question that is designed to prompt only a yes or no response is a closed question. An open-ended question (C) is one designed to prompt more information and therefore facilitate therapeutic communication. An indirect statement (A), which can also encourage therapeutic communication, is posed in a form such as "Tell me about..." Active listening is a good way of observing what a patient is communicating nonverbally.

26. A: When a person is exposed to an acute stressor, the sympathetic nervous system (not the parasympathetic) is initially triggered as the flight-or-flight response (B) which includes things like release of hormones (C), increasing of respiration rate (D), short-term memory loss, etc. After the body is exhausted by these reactions, then the parasympathetic nervous system is triggered to allow the body to resume normal functions.

27. D: Response D describes, in order, the four stages a person goes through on the way to job burnout. The four characteristics in response A, when preceded by the word "role," are features associated with job burnout.

28. C: If a worker accepts a workload that is too heavy, beyond his/her skill level, or not clearly differentiated from work others are doing, he/she can experience frustration, stress, and potentially burnout. Activities A, B, and D are all good ways to relieve stress.

29. D: AIDS, cancer, and end-stage renal disease are all potentially life-threatening illnesses that can result in lethargy and weight loss in addition to other symptoms. Stress manifests itself differently in every individual. While some individual's respond to stress with weight loss, others experience weight gain.

30. B: Response B illustrates the most likely scenario, according to Dr. Kubler-Ross. Response C, called the TEAR acronym, is another way of looking at the stages of grief.

31. C: The type of management technique that offers subordinates these types of rewards is participatory management. Authoritarian management (A) is essentially the same as micromanagement (B); managers practicing this style plan everything on their own and offer the subordinate only monetary return. Management by walking around (MBWA) is a style in which the manager visits employees to collect data about how smoothly the organization is running.

32. B: The first step as a manager in getting a team started is development of a work statement with the team (B), which should include mutually established (not pre-established, D) time frames and standards. Brainstorming (A) should be done after development of the work statement, and it often includes looking at benchmarks from other institutions (C) to determine feasibility. The later steps are planning, implementation, and recognition.

33. C: The best time to carry out a salary review for all employees is the beginning of each year because that ensures equality and continuity for each employee. This is fairer than waiting for the individual to ask for a salary review (B), which can result in much longer time periods, or at the time of their performance evaluation (A), to keep the two reviews separate. Practice funding (D) is important, but it is more cost-effective to retain good employees than to hire new ones.

34. A: The only responsibility listed that applies strictly to a medical assistant who functions as a human resources manager is developing and updating the office policy manual. The other responsibilities apply to medical assistants acting as office managers.

35. D: The only response that is discouraged is D, offering the potential employee the job at the time of the initial interview, because the interviewer should review all candidates before making any decisions. The other responses are all suggested behaviors during the initial interview of a potential employee.

36. B: Although overtime may be paid at twice the regular hourly rate (A), the general standard rate is at least one-and-one-half times the regular hourly rate for each hour over 40 in a week (B). Some medical assistants (Mas) may be exempt employees (C), but those are usually MAs functioning in higher grade levels, such as managers.

37. A: The act that guarantees that a provider will get back any monies an employee embezzles is to buy a bond that covers losses in that employee's name (A). Professional liability insurance (B) should be purchased by practicing medical assistants, but in that case things like malpractice are covered. Registration (C), while desirable, is not required for handling finances, and medical assistants are not licensed (D).

38. B: The correct response is quarterly.

39. D: Carbohydrates, fats and proteins can all be converted into energy, although carbohydrates (A) are the primary source. Proteins are mainly used to generate amino acids, which can be utilized as building blocks of structural proteins, enzymes, and hormones. Vitamins (D) have a variety of effects on various body systems, but generally do not convert to energy.

40. C: Trans unsaturated fatty acids are hydrogenated. This occurs when substances like vegetable oil are heated, making them solid at room temperature in things like stick margarine. These fats elevate the bad type of cholesterol, low-density lipoprotein (LDL), and lower the good type of cholesterol, high-density lipoprotein (HDL). Olive and canola oils (A) both have healthier types of unsaturated and saturated fats. Linoleic acid (B) is the one essential fatty acid needed in the human diet.

41. B: All of the statements are true, except for B. BMR is actually higher in people with lean body mass or relatively more muscle because it takes more energy to fuel muscles than to store fat.

42. B: The recommended daily intake for vegetables is 2-1/2 cups. The other answers represent three of the other food groups, namely fruits (A, 2 cups), milk (C, 3 cups for adults, 2 cups for children ages 2 to 8), and grains (D, 6 ounces). The other food group is meat and beans, with recommended daily intake of 5-1/2 ounces.

43. C: Antioxidants attack free radicals in the body that can harm DNA and blood vessel cells. The main antioxidants are vitamins A, C, and E, and the mineral selenium. Vitamin K and folic acid (A) contribute to blood clotting and formation of red blood cells and DNA. Vitamin D and the minerals calcium and phosphorus (B) contribute to bone growth. Several B complex vitamins and the minerals phosphorus, magnesium, and sulfur (D) contribute to energy metabolism.

44. A: People with type I diabetes mellitus are insulin-dependent because they do not produce insulin, a hormone needed to signal to cells that glucose is available for conversion to energy. If they do not receive insulin, carbohydrates will not be metabolized. People with type II diabetes (B) are not insulin-dependent and can usually control their disease through diet because they produce insulin, but in insufficient quantities. Gestational diabetes (D) is a temporary situation in which a woman develops glucose intolerance while pregnant.

45. B: Atherosclerosis is the correct answer, but all of these cardiovascular conditions can be interrelated. Hypertension (A) is high blood pressure, which can be due to things like high bodily water levels due to high sodium intake, but can also occur with atherosclerosis. Arteriosclerosis (C) is the hardening of the arteries due to reduced elasticity of the vessel, often as a result of atherosclerosis. Myocardial infarction (D) or a heart attack is an interruption of the blood supply to a coronary artery due to eruption of an atherosclerotic plaque.

46. A: Cancer is the general term for unregulated cell growth. Cancers derived from epithelial cells are the most common type and are known as carcinomas (A). Cancers derived from connective tissues such as bone are called sarcomas (B). Cancers derived from blood-forming hematopoietic cells are called lymphomas and leukemias (C). Cancers derived from pluripotent stem cells are called germ cell tumors (D).

47. C: Viruses do not produce spores, but a number of other types of microorganisms do, including certain bacteria, fungi, and protozoa. Viruses can only reproduce within another type of living cell (A). They are pathogenic (B) like most microorganisms (but not all bacteria are). They cannot be observed directly under light microscope (D), although their effects may be.

48. B: Vectors are disease carriers, such as ticks or mosquitoes, that carry a microorganism to ultimately infect a human or other organism; most are associated with transmission of rickettsiae, which are small, nonmotile bacteria that are intracellular parasites. The other answers are other modes of transmission for microorganisms. A fomite (A) is an inanimate object, such as a piece of equipment, on which a microorganism lives until it is transmitted. Bloodborne transmission (C) is a common mode in which infection occurs through exposure to blood. An exudate (D) is wound drainage, which often transmits a microorganism through direct contact. Other transmission modes include airborne transmission and ingestion.

49. C: MMR, varicella, and zoster vaccines are all contraindicated in the described patient categories, because all of these vaccines contain live attenuated viruses and the patients have low immune responses. The other vaccines are safer because they contain either inactivated virus or only viral proteins.

50. A: Foreign invaders are initially recognized by macrophages and helper T cells. After they are recognized, the two types of immunity directed against specific antigens, cellular and humoral, are activated. Cellular immunity involves activation of helper T cells to develop memory and killer T cells (C); along with macrophages, the killer T cells surround and kill the foreign organism or cell. Humoral immunity involves activated B cells, which divide into memory B cells and plasma cells. These produce specific immunoglobulins (D) called antibodies, which bind to the antigens.

51. B: MRSA, caused by methicillin-resistant *Staphylococcus aureus*, and tuberculosis, caused by *Mycobacterium tuberculosis*, are both highly drug-resistant bacterial infections, thus limiting antibiotic treatment options. There are a number of ways to diagnose each, and they are not viral.

52. D: All of the statements are true except for D. The other two major hepatitis virus infections, hepatitis B and C, usually become chronic, but hepatitis A is generally resolved within two months of contraction and patients do not become carriers of the virus.

53. C: This is a description of Parkinson disease. Multiple sclerosis (A) is demyelination of nerve fibers resulting in symptoms such as visual disruptions and muscle weakness. Meningitis (B) is inflammation in the brain or spinal cord, caused by a viral or bacterial infection and resulting in symptoms like headache, fever, and stiff neck. Sciatica (D) is sharp leg pain along the sciatic nerve due to its compression by a severed intervertebral disk or osteoarthritis.

54. A: These are all neurotransmitters of some type, but acetylcholine is the one released at the neuromuscular junction. Gamma aminobutyric acid (GABA, B), is an inhibitory transmitter in the brain. Serotonin (C) is found primarily in the intestinal tract and central nervous system, and contributes to feelings of well-being. Dopamine (D) activates a number of receptors in the brain. There are a number of other neurotransmitters as well.

55. D: The major circulatory disorder associated with a streptococcal infection is rheumatic fever (A). This can, in turn, cause narrowing or stenosis of the mitral valve (B), thwarting blood flow between the atrium and ventricle of the heart. It can also cause carditis, or inflammation of the heart muscle, which could manifest as congestive heart failure (C) or other heart conditions. The correct answer, varicose veins (D), is completely different; these enlarged veins are caused by impaired venous return.

56. B: The term "anemia" refers to any disorder characterized by low circulating red blood cells and hemoglobin, resulting in symptoms like pallor, weakness, and malaise. There are three variations: iron deficiency anemia (A) due to decreased levels of iron; pernicious anemia (B), due to lack of intrinsic factor which results in an inability to absorb vitamin B12; and sickle cell anemia (C), a hereditary disorder in which the red blood cells are shaped like sickles and often lyse and clump in blood vessels. Hodgkin disease (D) is a type of cancer of the lymphatic system.

57. B: The skin consists of three layers: the outer epidermis (A), made up of squamous epithelium, keratin, and melanin; the middle dermis (B), which contains the blood vessels, nerve endings, glands, and some connective tissue; and the deepest hypodermis (C), with subcutaneous connective and adipose tissue. Integumentary (D) is the inclusive name for the system of the skin and its connected structures like hair nails, nerve endings, and oil and sweat glands.

58. C: The contagious skin disorder described is impetigo. Dermatitis (A) is erythema (redness) due to an irritant. Dermatophytosis (B) is a contagious fungal infection causing skin to flake, scale, and itch, most often in the foot area (also called athlete's foot or tinea pedis). Psoriasis (D) is a chronic autoimmune type of dermatitis, the most common presentation of which is red and white scaly patches.

59. D: All of these statements are true regarding herpes zoster infection or shingles, except for D. There is an available vaccine recommended for adults over 60.

60. A: There are various types of immunotherapy, including immunomodulation for instances such as cancer. However, when the term is applied to allergic diseases, it refers to the injection of increasing amounts of allergens (to which the patient is allergic) to induce production of blocking IgG class antibodies (A), not IgE class antibodies (B), which are the type causing the allergy in the first place. The goal is not general buildup of the immune system (C).

61. C: Pyelonephritis (C) presents with these types of symptoms after a pyogenic bacterial infection. It is usually located in the bladder and kidneys. Pyelonephritis can occur due to pregnancy or renal calculi or kidney stones (D), the main symptom of which is excruciating pain when they are lodged in and move within the ureter. Cystitis (A) is inflammation of the bladder due to a urinary tract infection. It is characterized by signs like urinary frequency and burning. People with glomerulonephritis (B) also have chills, fever, and hypertension due to inflammation of the glomeruli or small blood vessels in the kidneys; streptococcal infection is one cause.

62. D: The bladder is the final part of the urinary system that collects and stores urine prior to excretion. The kidneys perform all of the functions listed in A, B, and C, as well as others, such as releasing certain hormones.

63. B: GERD occurs when there is valve leakage in the area between the esophagus and stomach, which brings up stomach acid and causes heartburn. Response A describes gastric (stomach) and duodenal ulcers, which can be caused by things like *Helicobacter pylori*, salicylates, alcohol, and too much secretion of hydrochloric acid. The other responses refer to diverticulitis (C) in diverticula of the colon, and Crohn disease (D) in the ileum or final section of the small intestine.

64. C: Pain due to stones is generally associated with the gall bladder. The other statements (A, B, and D) all pertain to the pancreas. Inflammation of the pancreas (D) is pancreatitis, which can be life-threatening because pancreatic enzymes can cause the organ to necrose and hemorrhage.



65. A: Response A is the order in which parts of the digestive system comprise the large intestine, not just the parts of the colon (C). Response B is the order of structures within the small intestine. The structures described in D are organs that are associated with the digestive system.

66. C: Diabetic retinopathy, the chief cause of blindness in the United States, is injury to the retina in individuals with diabetes due to vascular changes. Retinal detachment (A), separation of the retina from the choroid layer, can also cause blindness. Untreated glaucoma (B), high intraocular pressure due to accumulation of aqueous humor, can impair vision significantly. Presbyopia (D) is the loss of elasticity in the lens which occurs as people age, thus impairing close vision.

67. B: This gel between the lens and the retina on the inner surface of the eye is the vitreous body or vitreous humor, which differs from the aqueous humor (D), which is a watery substance occupying the space between the lens and the cornea on the front of the eye. The fovea centralis (A) is the spot in the middle of the central macula region of the retina, which is responsible for sharp central vision. The sclera (D) is the outer white layer of the eye.

68. B: Myopia, also known as near-sightedness, occurs because the eyeball is elongated, causing light rays to focus in front of the retina. Astigmatism (A) is due to non-uniform lens curvature or cornea shape. Farsightedness (C) is due to shortening of the eyeball, causing light rays to focus beyond the retina. Response D describes normal vision.

69. A: Equilibrium is maintained by the vestibular system in the inner ear. The cochlea (D) is also in the inner ear, but it is associated with hearing. The middle ear is made up of three bones (malleus, incus, and stapes) carrying waves from the outer ear, and the hollow space called the tympanic cavity (B). The auricle (C) is the external ear.

70. C: This is a description of hearing loss called otosclerosis. Tinnitus (A) is hearing sound within the ear in the absence of external sound, which could be due to something like impacted cerumen (ear wax). Otitis media (B) is a middle ear infection resulting in symptoms like pain, discharge, hearing loss, etc. Ménière disease (D) is a composite of the symptoms of hearing loss, vertigo, tinnitus, and nausea, probably due to swelling of the labyrinth in the inner ear.

71. D: Epistaxis is another word for nosebleed. This could be caused by a variety of factors, including those listed in A, B, and C, as well as low humidity in the environment, nasal infections, and many others. Childbirth has nothing to do with this condition, but an episiotomy (which sounds similar) is sometimes done during childbirth.

72. D: Gas exchange takes place in the alveoli, which are the tiniest air sacs in the lungs. When air is taken in during the inspiration phase of respiration, the order of intake is nose or mouth, pharynx, trachea, bronchi, bronchioles, and then the alveoli.

73. C: Asthma is usually reversible because it involves inflammation but not actual airway narrowing, whereas in the two types of COPD, emphysema and chronic bronchitis, there is permanent narrowing of the airways (B). Dyspnea, shortness of breath, is a common symptom of both asthma and COPD. Loss of elasticity of the alveoli (most commonly due to smoking) is the hallmark of emphysema.

74. D: Pneumonia is inflammation of the lungs resulting in symptoms like chills, fever, cough, and yellow sputum. It can be caused by various bacteria, fungi, viruses, and sometimes chemical irritants.



75. D: Three of the options are abnormal curvatures of the spine, with scoliosis (D) being a sideways curvature to the right or left. Lordosis (A) is an inward curve to the lower spine, resulting in swayback. Kyphosis (B) is an outward curve to the upper portion, resulting in hunchback. Paget disease of bone (C) is characterized by localized, irregularly shaped, weakened bones, resulting from relatively excessive bone destruction followed by their irregular repair.

76. B: Comminuted fractures involve splintering into a number of fragments; if those fragments are forced into another bone, they are said to be impacted. A greenstick fracture (A) is a fracture in which the bone bends and partially breaks, usually found in soft, young bones. An oblique fracture (C) is a fracture in which the break is diagonal to the bone's long axis. A transverse fracture (D) is a fracture at a right angle to the bone's long axis.

77. B: There are many types of arthritis or joint inflammation. A number of these are either proven or suspected to be autoimmune diseases, the most prevalent being rheumatoid arthritis. Osteoarthritis (A) is a chronic joint inflammation due to degeneration and overgrowth of bone and cartilage. Gout (C) is joint inflammation due to deposition of uric acid crystals through a defect in purine metabolism. Psoriatic arthritis (D) is joint inflammation in individuals with the skin condition psoriasis.

78. D: Direct deposition of bone cells into the primitive connective tissue mesenchyme is the other type of bone formation, intramembranous ossification. The other characteristics listed are associated with endochondral ossification.

79. C: There are two bones connecting the knee cap (the patella, A) to the foot; the larger is the tibia (C) and the narrower one is the fibula (D). The femur (B) is the thigh bone.

80. B: The vertebral column consists of 24 articulating vertebrae and nine fused vertebrae in the sacrum and coccyx. It does house and protect the spinal cord (A), but that is not part of it. Individual vertebrae are made up of the anterior vertebral body and the posterior vertebral arch (C). The vertebral column is continuous, not clearly separated into regions, although there is a characteristic curvature to the spine normally and the fused areas look different than the articulating ones.

81. A: The cervical region is the top portion of the spinal cord; it consists of eight levels (C1 to C8) and controls movements in the areas listed in response A. There is some overlap in the functions in other regions. However, essentially response B describes movements controlled by the next section, the thoracic (T1 to T12), response C describes those controlled by the next lower lumbar section (L1 to L5), and response D describes movements controlled by the even lower sacral region (S1 to S5).

82. D: Viral infections have been associated with the neurologic disorders meningitis, inflammation of the meninges membranes in the spinal cord and brain, and Reye syndrome, which in later stages can cause seizure and coma. Herpes zoster and West Nile virus also have adverse neurologic effects. Tic douloureux (B) is a neurologic disorder in which there is deterioration of or pressure on the trigeminal nerve, which causes facial pain commencing at the jaw.

83. B: All of the statements except B, direct impairment of cranial nerves, are true. Regarding response D, there are two types of CVA or stroke: hemorrhagic, caused by hemorrhage of a blood vessel in the brain, and ischemic, whose potential causes include obstruction by a blood clot

(thrombosis) or embolus from somewhere else (embolism), systemic hypoperfusion, and venous thrombosis.

84. C: The hypothalamus is the brain portion primarily responsible for maintaining homeostasis, equilibrium of the internal environment. The pons (D) is involved in these functions also, but it is in the brainstem. The cerebellum (A) modulates things like motor function and cognition, and the cerebral cortex (B) or gray matter controls functions such as memory and language.

85. D: Paralysis can be caused by stroke, poliomyelitis and spinal cord injury, as well as a number of other means of interfering with nerve function, such as the drug curare, and conditions like multiple sclerosis, spina bifida, and Guillain-Barré syndrome. Heart failure has no direct impact on nerve function.

86. C: Coordination of benefits (COB) refers to policy language that describes how multiple applicable policies will be coordinated to limit the amount paid to no more than 100% of the fee. This is different than assignment of benefits (B), which means the signing over of benefits to someone else. Preauthorization (A) is the carrier's consent prior to care, which, depending on the policy, may or may not be required. The deductible (D) is the amount of out-of-pocket medical expenses a person must pay before the policy starts to pay, generally on a yearly basis.

87. A: Capitation is a payment system in which the health care provider is paid a fixed fee per patient, a common method used by Managed Care Organizations, as opposed to a specific fee for a particular service (B), which is more common with traditional insurance.

88. B: This is a description of the PPO model of a Managed Care Organization. Health Maintenance Organizations (HMOs) are similar but usually require use of only physicians in the system and selection of a primary care provider for payment as well. A POS plan allows the patient to use HMO provider services or non-HMO providers at higher rates. An EPO consists of providers and facilities under exclusive contract. An IDS uses associated service providers that work together to reduce cost.

89. B: Medicare Part B covers outpatient expenses, such as provider charges, laboratory tests, and durable medical equipment. Hospital stays and home health and hospice care (A) are covered to an extent under Medicare Part A, and prescription drug coverage (C) is the essence of Medicare Part D, if purchased. Medicare Part C or Medicare Advantage plans are private plans approved by Medicare that usually cover the same things as Parts A, B, and sometimes C.

90. C: RBRVS, which is a comprehensive regional scale of fees for Medicare services, is used to calculate Medicare payments. Response B is a related answer in that PAR and non-PAR signifies whether the provider is a regular Medicare provider or not, which influences how Medicare payments are determined. Medigap policies (A), which are supplemental insurance policies addressing non-covered fees, are not taken into account.

91. D: Those receiving Aide to Families with Dependent Children, those who cannot work due to physical difficulties, pregnant women earning less than poverty-level wages, as well as people who cannot work due to emotional or mental problems are eligible to receive medical care under the Medicaid program. All above the age of 55 are not necessarily eligible.

92. B: The TRICARE program offers 3 levels of medical insurance for active duty soldiers, national guardsmen, reserves, military retirees, their families, and survivors. TRICARE Prime is the level for

active soldiers and is administered mostly in military hospital facilities. TRICARE Extra (C) uses civilian preferred providers, and TRICARE Standard (D) uses fee-for-service providers. CHAMPVA (A) stands for Civilian Health and Medical Program of the Veterans Administration, which provides insurance to spouses and dependents of veterans who were disabled or killed in the line of duty.

93. B: Workers' compensation insurance always covers all medical expenses and lost wages as defined by state minimum standards. The company may pay a settlement at a later date as well, but that is not part of workers' compensation per se.

94. B: When using a customary fee system, the insurance carrier will pay the full fee the provider charges, providing it falls within the customary fee range charged in that geographical region. Anything above that range will have to be written off by the provider as an adjustment (D). The top fee (A) is not automatically paid. The RBRVS-calculated fee (C), as determined relative to Medicare, may be the actual fee paid, but not necessarily.

95. C: HIPAA laws govern patient health information that is generated, transmitted, received, or stored electronically. Therefore, when information in an electronic record is transmitted via phone or fax, it becomes subject to the HIPAA security rule.

96. B: RVUs are computed using a complex equation involving all of these factors, which is then multiplied by a conversion factor to convert the RVU into dollars.

97. B: The addition of a plus sign before the code indicates the service lasted longer than described in the original code. The provider should not enter the code twice (A), use an unlisted code with an attached report (which is used for services for which a code cannot be clearly identified), or use a Category III code (which is temporary and designed for emerging technologies).

98. C: While the correct modifier for use of a surgical team would be 09966, the question asks for the general method of determining the modifier. This is described in response C, using a code beginning with 099 and ending with the appropriate two-digit modifier. The other responses describe coding options if multiple modifiers are required.

99. C: When billing for Medicare or Medicaid patients, HCPCS codes should be used. ICD-9-CM codes (A) are widely used but they are not specific to Medicare/Medicaid; V codes (D) are part of this system. The CPT (B) coding system is also widely used.

100. A: Response A is the general format for an ICD-9-CM description of the disease diagnosis. The format in response B is used under ICD-9-CM when the reason is an external cause, such as injury or poisoning. Response C describes the general format used for coding under the Current Procedural Terminology (CPT) or Healthcare Common Procedure Coding System (HCPCS) systems. The prefixes E, V, or M are used under ICD-9-CM to indicate an external cause, supplementary health factors, and morphology, respectively, but this system does not use an unseparated five-digit numeric code.

101. B: The correct answer in this case is the UB-04 form. The claim form generally used for office visits is A, the CMS-1500 (08-05), which derives information from the initially completed encounter form (D). The Authorization for Release of Medical Information form (C) is usually signed by a patient to allow for transmission of medical information.

102. C: Medicare patients can be held responsible for some out-of-pocket expenses if they have signed an ABN. A written waiver (B) is the same type of document as referred to for Medicaid.

103. D: Although the majority of facilities now use computerized financial systems, the most commonly used manual system is the pegboard system, also called the write-it-once method. This system incorporates the patient ledger (A), the encounter form (B), and other things like charge and deposit slips, day sheets, and checks. Posting (C) is the term for the recording of financial transactions into the bookkeeping system.

104. C: All payments by the insurance company or patient, as well as adjustments, which include discounts and write-offs, should be posted as credits. The ledger should also include all debits (A) and a running balance (D).

105. A: In a manual pegboard-type system, day sheets and month-end sheets are used to reconcile practice balances with patient ledgers. Accounts payable (B) are promises to pay suppliers for expenses incurred and are not part of day or month-end sheets. Receipts (D) are given to patients to record their payments.

106. C: Typically, computerized account systems will generate bills that include contact information for both the practice and patient, services performed, charges/payments/balances, and the account number and date of billing. The patient's medical history is not included in the generated bills, in order to protect patient privacy.

107. D: The only way to ensure against cashing of a check by anyone else is restrictive endorsement, which means that in addition to a signature (which could be A, a rubber stamp) the words "for deposit only" or "pay to the order of..." are added. Further information, such as the account number for deposit, should also be included. A blank endorsement (C) is the signature alone, which does not ensure safety. Daily depositing of a practice's checks (B) is a good idea, but not sufficient.

108. B: All of these practices are good ways of guaranteeing payment, but response B describes what is required under the Truth in Lending Act for making installment payments.

109. B: Rapidity of patient account payment is calculated by the accounts receivable ratio, which is defined as:  $\text{current accounts receivable} / \text{average monthly gross charges} = A/R$  or turnaround time in months. Many feel a good ratio is two or less, meaning that, on average, practice account balances are past due by two months or less (C). Aging is similar, but it refers to a specific patient account. The collection ratio (A) is an indication of the effectiveness of billing procedures, and is defined as:  $\text{current month collections} / \text{total monthly charges minus adjustments}$ .

110. C: Generally, the order of attempting to settle overdue bills is telephone collections (A), followed by one or more collection letters (B), and then use of an outside collection firm. Occasionally, a tactic might be filing in small claims court, but only small claims can be brought and the process is time-consuming.

111. B: There are two types of bankruptcy that can be declared. Under Chapter 7, the debtor is cleared of all debts, so the office may need to write-off the charges (A); however, the required procedures are outlined in response B. Answer C describes what should be done if the patient has declared Chapter 13 bankruptcy, in which they come up with a plan to pay off some of their debt; unfortunately, a medical provider is low on the list of payees because their services are unsecured debt. Probate court (D) is the court that deals with debt related to an estate.

112. D: An accounting software practice that computerizes every aspect of running a medical facility, including patient data, electronic records, and accounting procedures, is known as a total practice management system (TPMS). A computer service bureau (C) utilizes an outside company to coordinate data, billing services, etc. The other two options are manual methods of bookkeeping. In the single-entry system, a daily log and various records are kept and then posted to a ledger. In the double-entry system, assets are balanced against the sum of liabilities and owner's equity.

113. D: This type of accounting is financial accounting. Managerial accounting (A) is designed to provide data that improves internal management, and a subset that focuses on what particular services cost is cost accounting (B). Cost analysis (C) is the method of determining the costs of services, which are a composite of fixed and variable costs.

114. B: When using an accrual basis for income reporting, the income is recorded at the time the charges were produced. Response A describes the cash basis for income reporting, which is more commonly used.

115. C: There are three categories of fidelity bonds that can be purchased. The type that covers any employee is a blanket-position bond. A position-schedule bond (A) pertains to a specific position but not a named employee. A personal bond (B) covers one named employee.

116. D: When closing the facility, an administrative medical assistant should routinely lock up all of these elements, except cabinets for cleaning supplies, should there be an after hour janitorial service. Cabinets used for storage of records and drugs, along with petty cash, are of higher concern. An alternative to locking up the day's receipts is to take them and a bank deposit to the bank that day.

117. D: Both responses B and C are good ways of estimating the number of needed chairs in the waiting room. The medical assistant or receptionist must be able to see all of the people in the waiting room.

118. B: RAM is the type of internal memory used for temporary storage of data and programs; it can be both written to and read from. ROM (A) is data that is permanently stored on the computer motherboard on chips. Data storage memory (C) is also permanent memory, but it is stored in places other than the motherboard, such as internal or external hard drives, or optical drives like CDs or DVDs. RAID storage (D) is a whole storage system.

119. D: Generally there would be both an https:// address and a padlock to the right. A site address beginning with http:// (A) is not secure.

120. B: An EMR (A) is an electronic medical record from a single source, such as a medical practice, but when EMRs from various sources are combined to generate a comprehensive electronic patient database they constitute an EHR (B). MOSS (C) is an available type of TPMS (D).

121. C: Glare from incoming light is prevented with the relative positioning described in response C. The other positions can result in some type of glare, either directly into the eyes or indirectly from reflection off the monitor (A). The monitor should be placed just below eye level.

122. D: A medical assistant can take a call regarding a prescription refill. However, they cannot authorize the refill themselves, so the information must be given to the provider for authorization. The other listed calls can be handled by the medical assistant.

123. A: Under the right to confidentiality, the only type of individual listed that a provider is allowed to discuss information about a patient with in all circumstances is their parent or legal guardian. A medical assistant should never discuss a patient with their employer (B), and discussions with insurance carriers (C) or attorneys (D) are allowed only if a signed release is obtained from the patient.

124. B: All of these are features of encrypted email except VPN (B), which is a way of increasing security using Voice over Internet Protocol (VoIP) communications.

125. C: This style is wave scheduling, a variation of which is modified wave scheduling, in which several patients are scheduled at the top of the hour plus single appointments at approximately 15-minute intervals thereafter. Double booking (A) involves scheduling two or more patients simultaneously but performing different functions on each, such as seeing the doctor versus laboratory tests. Clustering (B) is a style in which patients with similar types of issues are booked one after another. Stream scheduling (D) is continuous booking of patients within discreet time frames. Other scheduling styles include open hours, in which patients are seen without appointments on a first-come, first-served basis, and customized practice-based scheduling.

126. D: Depending on whether scheduling is done on a daily appointment sheet or via computer, any combination of these things should be done. The important thing for legal and other purposes is to document cancellations and no-shows in some type of permanent record.

127. C: When using an electronic medical record, this is the way of correcting errors discovered promptly. Response D describes how to make these corrections later, after the software locks out the method in response C. Responses A and B describe the right and wrong ways, respectively, to make corrections on paper medical records.

128. B: An accession record is a journal or computer listing with predetermined numbers, used in a numeric filing system to assign a number (rather than a name) to a file in order to protect patient confidentiality. The alphabetic card file is used as a cross-reference (A) and contains patient name and other information. There are two other types of filing systems, alphabetic (C) and subject (D), which is useful in research settings.

129. C: Modified block letter styles put some components, including those listed, in approximately the center. The standard modified block style is described. The indented modified block (D) differs in that paragraphs are indented five spaces. In a full block letter (B), every component begins flush with the left margin. A simplified letter (A) is similar, except that the salutation and complimentary closure are left out.

130. C: All of the statements listed apply to the postal class of bulk mail, except that it must be delivered to the bulk mail entry unit at the post office and cannot be picked up.

131. A: Facilities have varying requirements, but generally a STAT report is something containing needed information, such as a laboratory report which should be transcribed and returned in less than 12 hours. The 24-hour turnaround time (B) is generally for current reports, an example of

which is a history and physical examination (H&P) report. The 72-hour turnaround is generally for old or aged reports, such as discharge summaries.

132. D: Response C applies to CDC recommendations for use of Standard Precautions, but the OSHA Bloodborne Pathogens Standard goes further to include the items in response D.

133. D: If a patient has or may have a highly transmissible disease, both Standard Precautions and the applicable type of Transmission-Based Precautions should be used. Transmission-Based Precautions depend on whether the infectious disease is spread via the airborne route, physical contact, or respiratory droplets. The hallmark of Standard Precautions (A) is use of personal protective equipment (B), which includes gloves, gowns, and mouth, nose, and eye protection, but they also include proper hand hygiene and care with other potentially infectious materials like laundry.

134. B: The preferred disposal method is to put the sharp directly into a sharps container after use. Sharps and other biohazard containers have an orange or red-orange biohazard sticker. The scoop technique (A) is a way to recap (D) the needle for transport only if the sharps container is not nearby. Sharps and other forms of infectious waste are later burned or sterilized before disposal, usually by a company specializing in this disposal.

135. D: All of the actions listed are required after an accidental exposure. Additional requirements include testing of the source blood if the patient consents, counseling of the employee, and submission of an OSHA 301 form.

136. C: The preferred method of hand-washing is the procedure in responses A or B. The procedure in response D is acceptable, but the use of antibacterial wipes (C) is not.

137. B: The use of chemical germicidal agents on surfaces by wiping or soaking is known as disinfection; it destroys most pathogens, but not spores. Sanitization (A) is the use of techniques such as enzymatic detergents and ultrasonic cleaners to reduce microbial load on instruments and equipment. Sterilization (C) is the use of techniques such as steam sterilization to kill all microbes, including spores. Antisepsis (D) is the use of topical chemicals on the skin to kill or inhibit microbes.

138. A: The sequence in response A is optimal for ensuring the prevention of exposure to pathogens. After each type of PPE is removed, it should be disposed of in the biohazard container.

139. B: In order to maintain sterility, both hands should be held in front of the body, at a distance from the body, and above waist level.

140. B: During rinsing, hands should be down for medical hand cleansing and up for surgical hand cleansing. Surgical hand washing is longer and lotion can be applied after medical hand cleansing but not after surgical hand cleansing.

141. C: Heat-sensitive items, such as fiber-optic endoscopes, as well as certain items that will not fit in an autoclave for steam sterilization (D) should be sterilized using chemical or so-called "cold" sterilization. In this process, the object is immersed in a chemical solution that can kill certain microorganisms and then rinsed with sterile water. The other methods are either at too high a temperature (B and D) or impractical (A).



142. B: Response B describes the parameters that must be achieved for steam sterilization of wrapped instrument packages or trays. Response C applies if sterilizing unwrapped items (20 minutes for unwrapped objects covered with cloth). After the autoclave cycle is done, the door can be opened slightly when the temperature goes down to 212 degrees F, but the pressure at that point should be zero.

143. D: Use of biological indicators that are later cultured are recommended for quality control for autoclaves. These indicators contain heat-resistant bacterial spores (D), such as those from the thermophile *Bacillus stearothermophilus*, not a generic bacteria (C). Sterilization tapes (B), which contain a thermolabile dye that gets darker upon sterilization, do indicate that the proper parameters have been achieved but not whether spores have been killed. Autoclave tape (A) should be placed on packages to be autoclaved; they develop stripes which indicate that a high temperature has been achieved.

144. C: Cryosurgery destroys tissues, namely things like superficial lesions, by freezing them. Usually liquid nitrogen (C) is used because it gets very cold, making it quite destructive. Nitrous oxide (D) can also be utilized for most applications, except things like removal of cancerous lesions that require complete destruction. Silver nitrate (A) and sodium hydroxide (B) are commonly used for cautery of broken blood vessels in nosebleeds and destruction of toenail growth plates after removal of toenails, respectively.

145. B: The smallest suture material available is gauge 6-0, and it is commonly used in ambulatory settings. Gauge 0 is larger, and gauge 4 is the largest. Swaged (A) is a term referring to suture materials that come pre-attached to a needle.

146. C: The feature described is a ratchet. Serrations (A) are generally at the other end of the instrument and are a series of narrow slits that secure gripping without tearing the tissue; they are found on instruments like hemostats or loops (D). On the other hand, teeth (B) are sharp and puncture the tissue.

147. A: Mayo dissecting scissors have beveled edges instead of some combination of blunt and/or sharp edges, characteristic of standard operating scissors. The other types of cutting instruments described are scalpels (B), suture or stitch removal scissors (C), and iris scissors (D).

148. B: All hemostatic forceps or hemostats, which are utilized to grasp and clamp blood vessels, have ratchets and serrations. Most, but not all, are straight, and some have teeth in addition to serrations. Response C describes several types of forceps, used for ear and nose procedures, and response D characterizes the Allis tissue forceps.

149. D: Response D is a description of sounds, which are a type of probe. Otherwise scopes have all of the characteristics listed in responses A, B, and C. Examples of scopes are otoscopes (used in the ear), proctoscopes, anoscopes, and sigmoidoscopes (used to look at the rectum, anus, and sigmoid part of the large intestine). Other types of instruments used for dilating or probing include specula, retractors, and dilators.

150. C: Of the choices, the only thing that should not be done is to mix instruments composed of different types of metals. The processing time (D) varies depending on the instrument, but is usually at least five minutes.

151. B: The topical antibacterial cream used for burns and other abrasion wounds is silver sulfadiazine. The other choices are skin antiseptics: povidone-iodine (A), which can be used as a surgical scrub; chlorhexidine (C); and hydrogen peroxide (D).

152. C: Figure-eight turns, which alternate crossing on either side of the joint, should be used. Spiral turns (A) are circular turns that overlap when going up a body part. Reverse spiral turns (B) are turns that reverse or twist each turn on a limb that gets increasing larger. Circular turns (D) are turns that wrap around the body part several times. All bandages are non-sterile. They may be used over a sterile dressing to anchor it, or as support.

153. A: The property of epinephrine that makes it a frequent addition to injectable anesthetics is that it is a vasoconstrictor. When restricted blood flow to the area of surgery is desired, epinephrine is a good additive.

154. B: Response B describes the type of open wound known as an avulsion. A laceration (A) is unintentional tearing of body tissue by a sharp object. A puncture (C) is a small hole or wound caused by a pointed object. An incision (D) is an intentional cut made during surgery with a scalpel.

155. D: This is the correct use of gloves for changing a surgical dressing, as well as for removal and wound irrigation prior to putting on a new dressing.

156. B: Fevers in which there are significant fluctuations in body temperature are either intermittent (B), as described here, or remittent (C), in which the temperature never returns to baseline. A continuous fever (A) is one in which the body temperature stays above baseline pretty consistently. Febrile (D) is the general term for any presence of fever, a body temperature elevated above the normal range, which for an adult is an average of 98.6 degrees Fahrenheit.

157. D: Response D is the primary way in which a TA thermometer probe is used, although the probe can be used behind the earlobe (A) if there is a great deal of perspiration on the forehead. Probe insertion into the ear (B) is used with tympanic thermometers, which measure the aural temperature. Probe attachment to an electronic thermometer and insertion orally or rectally (C) is commonly used today but employs a different type of thermometer.

158. B: This is the correct method for changing a temperature from Celsius to Fahrenheit. The correct formula for the opposite is expressed in response D.

159. C: During emergency situations, the pulse site used is normally the carotid pulse, which is located on either side of the front of the neck, between the larynx and sternocleidomastoid muscle. In other situations, the radial pulse (A) above the base of the thumb on the wrist and the brachial pulse (B) in the antecubital space on the inner side of the elbow, are commonly used sites. The apical pulse (D) is located at the apex of the heart, can only be found using a stethoscope, and is typically used only in cardiac patients or infants. Other pulse sites include the temporal, femoral, popliteal, and dorsalis pedis artery sites.

160. A: A pulse rate of 70 beats per minute is considered a normal pulse rate for an adult (range 60 to 80 beats per minute). However, in infants and children this would be considered too low, because average normal pulse rates steadily decline from birth through infancy and childhood. The other choices are abnormalities. Bradycardia (B) is a pulse rate of less than 60 beats per minute. Tachycardia (C) is a pulse rate of more than 100 beats per minute. Arrhythmia (D) is any abnormal electrical activity in the heart, resulting in alteration of the interval between pulsations.

161. B: Orthopnea, or labored breathing, is difficulty breathing unless standing or sitting erect; it occurs in conditions like angina pectoris, heart failure, and various pulmonary conditions. The other situations do involve a period of complete absence of breathing known as apnea. Sleep apnea (C) is characterized by periods of more than 10 seconds in which breathing stops during sleep, depleting the brain of oxygen and potentially causing a variety of cardiac and neurologic defects. Cheyne-Stokes respiration (D) is a respiration cycle in which there is approximately 10 to 60 seconds of apnea, then deep and rapid breathing, and then a decreased rate.

162. C: This is a description of rales, which is indicative of secretions in the lung passageways. Stridor (A) and wheezing (D) are similar in that they are high-pitched sounds caused by some type of airway obstruction; stridor sounds more like crowing, while wheezing sounds more like whistling. Stertorous respiration (B) is labored breathing, similar to snoring, usually due to some upper respiratory obstruction.

163. A: Blood pressure is a function of the heart's strength and the elasticity and size of the arteries along with volume and blood viscosity. The amount of blood that leaves the heart with each contraction (D) is called the ejection fraction.

164. B: The only statement that distinguishes an electronic sphygmomanometer is that it does not necessitate simultaneous use of a stethoscope because there is a digital readout. There are three types of manometers, all of which use a pressure cuff (A): electronic, aneroid, and the traditional mercury type, which is being phased out. Response C is true of the aneroid type, which uses a dial attached to the rubber bladder pressure cuff.

165. A: There are five phases generally observed during deflation of the pressure cuff when taking blood pressure readings. The systolic pressure is the highest pressure, representing the force exerted on arterial walls during cardiac contraction, and it is heard as the first Korotkoff sound. In subsequent phases, more blood passes through the blood vessels. Generally, the sounds heard include swishing, then rhythmic tapping, and lastly muffled tapping sounds (C). Sometimes there is an auscultatory gap (B) sometime after phase I, in which no sounds are heard; but they later reappear. The diastolic pressure, which represents the force during cardiac relaxation, is taken when all sounds cease (D) in phase V. In children, diastolic pressure may be recorded in the previous phase IV, as some tapping may be heard down to pressure zero.

166. B: A blood pressure measurement in itself is written as "systolic pressure/diastolic pressure" (for example: 110/75), but it is preferable to also note the arm used and the patient position (for example: right arm, supine).

167. B: An adult with this blood pressure (BP) reading is considered to have prehypertension, which can lead to hypertension if not controlled. Normal blood pressure (A) for an adult is a systolic pressure less than 120 and a diastolic pressure less than 80. Any BP above 140/90 is considered high blood pressure or hypertension, but stage I (C) is 140-159/90-99, with anything higher than that termed stage II. Secondary hypertension (D) is high blood pressure due to some underlying cause, such as atherosclerosis. If atherosclerosis is treated, the BP can return to normal or close to normal.

168. B: Response A gives an adult patient's weight in pounds, but if for some reason this must be converted this into kilograms, divide by 2.2 (B). Response D gives a weight measurement in pounds for a young child under 50 lbs.

169. C: This examination is auscultation. Palpation (A) is the use of touch to feel for things like body parts, masses, and skin texture. Percussion (B) is tapping with the fingers or a percussion hammer to listen for characteristic dull or hollow sounds. Mensuration (D) is taking measurements such as height, weight, circumference of a body part, etc. Other examination methods are observation of things like symmetry, posture, etc., and manipulation to check for range of motion.

170. B: Patients with cardiovascular or respiratory problems should be positioned in either the semi-Fowler's or high-Fowler's positions, which are at 45- and 90-degree angles sitting up, respectively, to help them breathe. The dorsal recumbent or lithotomy position (A) has patients lie on their back with their knees flexed and their feet either on the table or in attached stirrups. This position is used for genital and pelvic examinations, urinary catheterization, and other examinations. The Trendelenburg position (C) has patients lie supine on their back with their feet elevated. This position is used to increase blood flow to the brain in emergencies and during abdominal or pelvic surgery. The Sims' position (D) has patients lie laterally on their left side. This position is used for situations like vaginal and rectal exams, sigmoidoscopy, etc.

171. D: The provider uses these supplies to check for dental hygiene issues (A) of note, including caries and pus discharge at the gums, and swollen tonsils (B) which both indicate infection. The tongue depressor is also used to test the gag reflex (C), which should occur when the soft palate is touched. Otitis media (D) is an ear infection that is checked using an otoscope.

172. B: All of these are a cause for concern, except the presence of bowel sounds if they are within expected levels.

173. C: Depending on the system used, either response A or B could be applied. Gravity refers to the total number of pregnancies, regardless of outcome. Parity is the number of pregnancies carried to the point of viability, generally considered to be 24 weeks after conception or the attainment of one pound of body weight. Parity is not dependent on whether or not there was a live birth or the number of children born. The FPAL system for parity reflects the number of full-term deliveries (F), pre-term or premature deliveries (P), abortions prior to 20 weeks (A), and current number of living children (L).

174. A: A urinalysis tests for all of the listed things except VDRL, which is a blood test for syphilis. Urinalysis is done to screen for diabetes, hypertension, infection, renal disease, and pregnancy. A number of other blood tests, smears, or cultures for infectious diseases, immunity, etc., are done as part of a prenatal visit. Glucose (C) is measured in the blood as well, to check for gestational diabetes.

175. B: This is a description of placenta previa. Eclampsia (A) is hypertension, edema, and proteinuria induced by pregnancy, which can endanger the fetus. Placenta abruptio (C) is sudden premature pulling away of the placenta from the uterus, which can cause fetal hypoxia and possibly death as well as maternal shock and possibly death. Incompatibility (D) is a situation in which the mother is Rh-negative and the fetus Rh-positive and the mother develops anti-Rh antibodies to the fetus's red blood cells, which can then be depleted and cause fetal death.

176. C: The only thing listed that must be done by the provider, not the medical assistant, is swabbing of the cervix with an antiseptic and injection of a local anesthetic.

177. A: The only false statement is that the actual breast examination should be done standing up, because it should be performed while supine in order to spread out the breast tissue. Other portions of the examination can be done standing up, such as checking in the mirror (D) and feeling the underarm area for swollen lymph nodes.

178. C: The Bethesda System of classifying Pap tests has three categories. Category 1 is a Pap test negative for intraepithelial, precancerous, or cancerous cells or other abnormalities. Category 2 is presence of epithelial cell abnormalities; it is subdivided into four groups, of which the ones represented here are subgroup 1a (atypical squamous cells of uncertain significance, response B) and subgroup 1c (squamous cell carcinoma, response C). Category 3 is the presence of other malignancies such as melanoma. CIN 3 (response A) would be correct under the other classification system, which grades the amount of cervical intraepithelial neoplasia into three types of increasing dysplasia (CIN 1, CIN 2, and CIN 3).

179. B: These procedures are used to ascertain the cause of female vaginitis or male urethritis. The medical assistant often assists by mixing the discharge sample in saline and putting it on the microscope slide (wet prep/wet mount), and later adding potassium hydroxide (KOH) and preparing another slide. These are used by the provider to identify yeast, bacteria, and trichomonas, and later for fungi with KOH addition. The other choices are diagnosed using the Amplified DNA Probe Test (A), laparoscopy or ultrasound (C), and cervical punch or cervical cone biopsies (D).

180. B: Subcutaneous epinephrine as described is always administered until the Emergency Medical Services (EMS) arrive or symptoms subside. Diphenhydramine (C) may also be necessary if the child is experiencing anaphylaxis, and CPR (D) may be needed in such a case to maintain the airways.

181. C: The deltoid muscle is the preferred intramuscular site for all ages, except infants younger than 12 months, who should be vaccinated in the anterolateral aspect of the thigh (A) or, if necessary, the gluteal muscle (B). The triceps muscle (D), which is lower along the arm, is the preferred site for subcutaneous injections. Intramuscular injections are done at a 90-degree angle to the skin, while subcutaneous ones are done at a 45-degree angle.

182. B: Growth charts up to age 36 months generally are separated according to sex and have a series of curves for both length and weight versus age in months. Typically, these measurements are recorded in one corner along with the date, age, and head (not chest) circumference. The head-circumference-for-age curves are usually on a chart that also shows percentiles for weight-for-length.

183. C: The preferred site to take a pulse rate in pediatric patients five years or younger is the apical pulse.

184. D: A prostate cancer screening includes a Prostate-specific antigen (PSA) blood test, a prostatic ultrasound and a biopsy. A urinalysis is not included in this examination.

185. A: All of these apply to doing a urinary catheterization on a female patient except for response A. While the provider should use sterile gloves, only the dominant hand retains sterility throughout, because once the provider starts wiping the genitalia, the other hand becomes contaminated.

197. C: All of the listed irregularities are types of arrhythmias. This pattern is seen in ventricular tachycardia, which is a very fast heart rate originating in the ventricles. Both ventricular tachycardia and ventricular fibrillation (D), which looks like an irregular up-and-down pattern on ECG, can indicate myocardial infarction and life-threatening situations. Atrial fibrillation (A) can be associated with conditions like mitral valve prolapse, and is indicated on ECG by irregularly spaced patterns without distinguishable P waves. Paroxysmal atrial tachycardia (B) is a sudden pattern of more rapid beating that lasts briefly; it can be seen in cardiac patients but often occurs in healthy people.

198. C: All chemical labels have composite National Fire Protection Association ratings on them in the form of four diamonds of different colors, with numbers from 0 to 4 on three of these diamonds indicating an increasing seriousness of the hazard. The blue diamond rates the health hazard, and "3" in that diamond means the chemical is a corrosive or toxic health hazard. Flammability is rated in the red diamond; a "3" would mean that it is a flammable liquid (A). Reactivity or instability is rated in the yellow diamond; a "3" would mean that it is potentially explosive near a spark or if heated (D). The fourth diamond is white; any symbol there would give information on a special hazard (such as W for water reactive) or appropriate protective equipment.

199. B: Response B is the approved basic metabolic panel of laboratory tests, while C is the approved comprehensive metabolic panel. Response A is the electrolyte panel, while response D is the hepatic function panel. There is often overlap between panels.

200. A: In order to collect a serum sample, the provider must use a tube that promotes clot formation, such as a red top, which contains no additives, or a red-gray mottled top, which contains a clot activator and serum separating tube. All of the other listed choices contain additives that prevent clot formation at some step in the cascade to give either plasma or whole blood.