

ATP Practice Test

1. What is the best mode of transmission for an EADL that controls a distant device such as a garage door opener?

- a. House wiring
- b. Ultrasonic transmission
- c. Infrared transmission
- d. Radio frequency transmission

2. What is the main difference between the RESNA Code of Ethics and the RESNA Standards of Practice for Assistive Technology Practitioners and Suppliers?

- a. The Code of Ethics is broader in scope than the Standards of Practice
- b. The Standards of Practice is specific to the Assistive Technology field, while the Code of Ethics is not
- c. The Code of Ethics lists modes of moral conduct to be adhered to, while the Standards of Practice gives specific concepts and rules for promotion of ethical principles
- d. The Code of Ethics is fairly general, while the Standards of Practice outlines a specific quality assurance program

3. What is the threshold for a person being tested by pure tone audiometry?

- a. The frequency in kilohertz (kHz) at which the person hears the tone 50 percent of the time
- b. The intensity in decibels (dB) at which the person hears the tone 50 percent of the time
- c. 6.5 dB at 1000 Hz
- d. The point at which the person understands speech presented at various frequencies

4. What stage of processing has the greatest effect on reaction time in an individual with apraxia?

- a. Sensory reception
- b. Neural transmission to the central nervous system
- c. Cognitive processing in the central nervous system
- d. Neural transmission to the muscle

5. Generally, what is the first step in ascertaining potential sites for control of assistive devices in a person with physical disabilities?

- a. Assessment of functional hand grasp patterns
- b. Using a range and resolution board to establish the minimal and maximal arm range and ability to hit a target
- c. Using a small range and resolution board to determine foot range and targeting
- d. Determining the person's range and resolution using a head pointer

6. Which of the following is NOT an example of the use of AAC in a child with an autism spectrum disorder?

- a. Use of static visual symbols
- b. Use of contextual clues or prompts
- c. Use of the PECS system
- d. Use of voice recognition software

7. Which of the following components is part of operational competence training by the ATP for a consumer receiving an assistive device?

- a. Training incorporating strategies for using and applying the system
- b. Performance aids such as step-by-step instructions
- c. Instructions on how to turn the device on and off, how to perform basic functions, and how to adjust, maintain, and troubleshoot the device
- d. Written instructions in the form of manuals and/or computer software

8. Which of the following is NOT a means of measuring user satisfaction as an outcome measure for use of assistive technology?

- a. QUEST
- b. COPM
- c. FIM
- d. Assistive technology abandonment

9. What systems should presently be included on a wheelchair that is used by the disabled individual who regularly rides in a bus?

- a. A combination of a four-belt tie-down and an occupant restraint system
- b. A combination of docking system and an occupant restraint system
- c. A passive rear-facing system
- d. A wheelchair tie-down system (four-belt or docking) and postural supports

10. What should be including in peer training of other students in a classroom with a student who uses assistive technology"

- a. Introduction of the class to the technology the student will be using in the student's absence
- b. Introduction of the class to the technology the student will be using in the student's presence
- c. Introduction of the class to the technology the student will be using as well as how they can help the latter, in the student's presence
- d. Familiarization of the teacher with the technology, who then relates this to the class

11. Under what circumstances are assistive devices paid for school-aged children under the Individuals with Disabilities Education Act?

- a. When a child with a disability needs them to obtain a "free and appropriate public education" (FAPE)
- b. When a child with a disability needs them to obtain a FAPE and an individualized education plan (IEP) has been outlined for the student
- c. When anyone with a disability needs them to get an education
- d. When an Individualized Family Service Plan (IFSP) has been submitted

12. In the context of assistive technology, what are soft technologies?

- a. Inexpensive, relatively low-technology devices such as modified eating utensils
- b. Components that can be easily purchased and compiled into an assistive technology system such as a mouth stick
- c. Those that utilize only human decision making, training, service delivery, etc., such as the personnel involved and written and computer instructions
- d. An assistive device devised using universal design

Answer Key and Explanations

1. D: EADLs are electronic aids to daily living. All of the listed answers are possible modes of transmission. However, radio frequency transmission (D) is the best choice for use with distant devices like garage door openers because it is not impeded by most materials except for grounded metal. Many more functions can be controlled when using house wiring (A), but it has several disadvantages in this case, including lack of portability and privacy. Both ultrasonic (B) and infrared (C) types are fairly portable, but in each case there must be a direct path between transmitter and receiver, as most materials block their signals.

2. C: The RESNA Code of Ethics lists specific modes of moral conduct to be adhered to; it includes a statement about informing and educating the public about assistive technology, in addition to statements related to moral conduct that other disciplines use. (A) is incorrect because the Standards of Practice actually is broader in scope than the Code. (B) is wrong because both are specific to the Assistive Technology field, although many of the standards are similar to those given in other medical standards of practice statements. (D) is incorrect since neither document actually outlines a specific quality assurance program.

3. B: In pure tone audiometry, thresholds are generally determined at frequencies ranging from 0.125 to 8 kHz as the intensity in dB that the person hears each tone 50 percent of the time in each ear. Decibels represent the amplitude of sound. Intensity (A) also represents a threshold in terms of the frequency of audible sound; that is not the meaning of “threshold” in pure tone audiometry, but the test does give an idea of the range of audible frequencies. Option (C) is one threshold for a normal individual without hearing loss. Option (D) is what is evaluated in another assessment, the speech recognition test.

4. C: The largest component contributing to reaction time is cognitive processing in the central nervous system (CNS). This is true for normal individuals (typically 70 to 300 milliseconds, ms), but it is amplified in people with apraxia who have an inability to perform complex movements through CNS involvement (such as with brain damage) but have intact peripheral systems. Normally typical times are up to 38 ms for sensory reception (A), from 2 to 100 ms for neural transmission to the CNS (B), 10 to 30 ms for neural conduction to the muscle (D), and 30 to 70 ms for a fourth component, latency and activation time of the muscle.

5. A: The first step generally is to assess seven functional hand grasp patterns, because the ideal control sites are the hands and fingers. Option (B), in which the individual uses his or her thumb to point to corners or touch them by hand using a range and resolution board, is usually performed after the functional grasp patterns. If the person cannot use his or her hands for controls, then range and resolution are determined using less preferable sites, which in decreasing order of preference are the head (D) or mouth, the feet (C), and arms or legs. Sometimes the chin, forehead, or eye movement is used for control.

6. D: Voice recognition software is really more a tool for people who have cognitive disabilities that curb their ability to write, such as those who have suffered traumatic brain injury (TBI). The other options are all examples of AAC, augmentative and alternative communication systems, which are appropriate for individuals with autism spectrum disorder (ASD). ASD is a developmental disorder primarily distinguished by challenges related to social interaction, verbal and nonverbal communication, and repetitive, stereotypical conduct. Use of static visual symbols (A), contextual

clues or prompts (B), and PECS, the Picture Exchange Communication System (C), have all been found useful for individuals with ASD.

7. C: All of these responses are ways of facilitating assistive technology performance once a device is delivered to the consumer. Answer (C) describes training that facilitates operational competence. Option (A) describes what is involved in training the person in achieving *strategic* competence, which is application of the device. Performance aids (B) and written instructions (D) are not training tools per se, but rather aids to help the person remember what to do.

8. C: The only outcome measure listed that does not evaluate user satisfaction is FIM, the Functional Independence Measure. FIM is a functional performance measurement of eighteen items such as self-care and communication, but it is basically useless in terms of evaluating assistive technology because maximal scores can only be obtained without use of such devices. QUEST (A) stands for the Quebec User Evaluation of Satisfaction with Assistive Technology, which consists of two sections, a user satisfaction questionnaire and a portion scoring variables related to satisfaction. COPM (B) stands for the Canadian Occupational Performance Measure, which evaluates the person's self-acknowledged goals and satisfaction. Assistive technology abandonment (D) is a gauge of dissatisfaction.

9. A: At present, the recommended wheelchair method of securement in public transportation like a bus would be a combination of a four-belt tie-down and an occupant restraint system attached preferably to one of the tie-down attachment points. Tie-down using a docking system (B) is infeasible at present because these systems are particular to the type of wheelchair, not universal; a universal docking adaptor is being developed. A passive rear-facing system (C), which uses padded structures instead of straps to protect the individual, has been introduced in some countries but has not been standardized. Option (D) would be similar but forward-facing, which is the current recommended direction, but these are generally not available.

10. C: It is generally recommended that the class be informed about the technology and how they might help the student using it while the latter is present, although sometimes school personnel or family members may decide that other students should not help to avoid damaging the equipment. It is best to have a peer training session, not simply relate the information to the teacher (D).

11. B: For school-aged children, assistive devices should be covered under IDEA if the child needs them for FAPE and an IEP has been filed. There are age limitations of three to five years under these provisions, making option (C) wrong. An IFSP (D) is used to provide coverage for children with disabilities from birth to age two.

12. C: Soft technologies utilize only human components and written or computer instructions. The assistive technology professional would be considered a soft technology. The other choices would be considered hard technologies, which option (B) defines. Low-technology devices (A) and universally designed devices, which are usable by all without adaptation (D), are other ways of defining devices, but are both hard technologies.

13. B: Class II (B) is the FDA (Food and Drug Administration) class that most wheelchairs would fall into, because it is the medical device class where performance standards must be fulfilled yet there is still little risk. These would generally include powered, standup and special grade wheelchairs as well as three-wheeled motorized modes. Class I (A) devices present nominal risk; things like wheelchair accessories fall into this class. Class III (C) devices are riskier and necessitate premarket approval by the FDA; a wheelchair that climbs stairs would be an example. The FDA does not have a