

HANDICAPPED SCUBA ASSOCIATION DIVE BUDDY EXAM

NAME _____ DATE ____/____/____

1. The Spinal Cord is protected by:
 - a. Myelin sheath
 - b. Vertebrae & meninges
 - c. Muscle groups
 - d. Quick thinking
 - e. All of the above

2. Becoming disabled present a person with a crisis calling for mental adjustment, this adjustment is strikingly similar to:
 - a. Divorce
 - b. Loss of employment
 - c. Relocation to a new environment
 - d. Loss (death) of a loved one
 - e. All of the above

3. The "ideal" final phase of the adjustment usually takes about two years and can be described as:
 - a. Independent, not accepting help when offered
 - b. Arriving at a value change in which the disability is seen as inconveniencing but not overwhelming
 - c. Reconciling to one's fate
 - d. A renewed involvement in life, interacting with the environment, such as eating out, attending family events and participating sports activities.
 - e. b & d are correct

4. Your student, a T-2 complete paraplegic, is on the dive boat suited-up and ready to dive. You notice that suddenly he does not look well. He is holding his head, has perspiration on his forehead, and his nose is congested. He probably has:
 - a. Orthostatic hypotension and should lie down until the symptoms go away before he is allowed to dive.
 - b. Become sick with a cold and should not be allowed to dive
 - c. Hyperreflexia caused by some stimuli and should not be allowed to dive until the source is found, removed and the symptoms go away
 - d. An allergic reaction that will go away when he begins the dive

5. A person with a disability appears to need help and you want to get involved, you should:
 - a. Pretend nothing is wrong and give them whatever assistance they seem to need
 - b. Assist them and talk to them about the weather or something completely unrelated.
 - c. Ask them if they need assistance
 - d. Ignore the situation and see if they can work it out themselves
 - e. All of the above

6. When developing a relationship with an individual who has a disability:
 - a. Relate to their personality, not their disability
 - b. Treat the disability as a feature of the person, not to be ignored
 - c. Treat the disability as a feature of the person but not the main feature
 - d. Talk to them openly about their disability
 - e. All of the above

7. The vertebrae are classified into three groups; which is the correct grouping?
 - a. 10 thoracic, 6 lumbar, 7 cervical
 - b. 5 lumbar, 12 thoracic, 8 cervical
 - c. 7 cervical, 12 thoracic, 5 lumbar
 - d. 7 thoracic, 12 cervical, 7 lumbar

8. The approximate location of these three groupings of vertebrae is:
 - a. Cervical - neck, Thoracic - trunk, Lumbar - lower back
 - b. Thoracic - neck, Cervical - trunk, Lumbar - lower back
 - c. Cervical - neck, Lumbar - trunk, Thoracic - lower back
 - d. Lumbar - neck, Thoracic - trunk, Cervical - lower back
 - e. None of the above

9. If someone refers to their disability as T-6 Complete, they mean:
 - a. The area of injury to the spinal cord is at the #6 thoracic vertebra
 - b. They have a complete loss of sensory and motor functions below the 6th thoracic vertebra
 - c. They have a loss of sensory and/or motor function below the 6th thoracic vertebra
 - d. a and b are correct
 - e. None of the above

10. A person whose disability is the result of Polio or Guillain-Barre may have:
 - a. Loss of motor and sensory function
 - b. Loss of motor function and bladder or bowel control
 - c. Loss of sensory function only
 - d. Loss of motor function only
 - e. None of the above

11. Decreased circulation in affected areas increase the tendency toward chilling and fatigue for people with disabilities caused by:
 - a. Traumatic spinal cord injury
 - b. Polio and Guillain-Barre
 - c. Traumatic spinal cord injury, Polio and Neural Tube defects
 - d. Spina Bifida
 - e. None of the above

12. A person's disability is classified as quadriplegic. Which one of the following is correct?
 - a. They have a spinal cord injury within the area C-7 to C-4, all four limbs are involved. They may have a loss of thermal control, ability to sweat below the level of injury; their respiratory function, reduced ability to breathe, may also be affected.
 - b. They have a spinal cord injury within the area C-7 to C-1, all four limbs are involved. They may have a loss of thermal control, ability to sweat below the level of injury; their respiratory function, reduced ability to breathe, may also be affected
 - c. They have a spinal cord injury within the area T-2 to C-1, all four limbs are involved. They may have a loss of thermal control, inability to sweat below the level of injury; their respiratory function, reduced ability to breathe, may also be affected
 - d. They have a spinal cord injury within the area T-2 to C-4, all four limbs are involved. They may have a loss of thermal control, inability to sweat below the level of injury; their respiratory function, reduced ability to breathe, may also be affected
 - e. None of the above

13. Your student is a C-6 incomplete quadriplegic; you are on board the dive boat and preparing to dive with her. The correct procedure is:
 - a. Assemble your student's scuba gear, put on her exposure suit and weight belt, at the point of entry don her scuba, mask and snorkel, ensure her leg bag is empty, and inflate her BCD. Assemble and don your scuba equipment, roll her into the water to your waiting assistant, and enter the water yourself. Begin the diving activities immediately
 - b. Assemble your student's scuba gear, put on her exposure suit and move her to the point of entry. Lay her down and put on her weight belt, sit her up and don her scuba, mask and snorkel. Buddy check and roll her into the water to your waiting assistant. Don your scuba equipment and enter the water. Check her equipment and begin the diving activities
 - c. Assemble and check the scuba gear for you and your student. Put on her exposure suit, move her to the point of entry, lay her down and don her weight belt. Sit her up and don her scuba, mask and snorkel, ensure her leg bag is empty and inflate her BCD. Buddy check and roll her into the water to your waiting assistant, don your gear, and enter the water. Check her equipment and begin the diving activities
 - d. Assemble and check her scuba gear, and prepare your scuba gear for diving. Put on her exposure suit, move her to the point of entry, lay her down and put her weight belt. Sit her up, ensure her leg bag is empty, and don her scuba, mask and snorkel. Roll her into the water to your waiting assistant. Don your scuba gear, enter the water and begin the diving activities

14. Spinal cord injury sometimes causes a loss of bladder control and a urine collection bag, commonly called a leg bag, may be worn. Which one of the following is correct?
 - a. Males and females may attach to the leg bag with a gizmo or an indwelling catheter
 - b. Males will use a condom catheter called a gizmo and females will use an indwelling catheter
 - c. Males may catheterize intermittently, use a leg bag with either a condom catheter, commonly called a gizmo, or an indwelling catheter inserted into the bladder through the urethra. Females will use an indwelling catheter with a leg bag, or catheterize intermittently
 - d. Females usually don't require the use of a collection bag

15. Multi-level Certification is based upon the divers ability help another diver in distress, and/or the type of buddy assistance they require. Which of the following statements are true?
 - a. The third dive buddy in a Level B or Level C dive team is necessary to assist the B or C diver
 - b. Level C certification is for divers that have been unable to demonstrate their ability to perform certain skills, such as operating a BCD, that require the assisting buddy to have skills beyond that of an open water diver
 - c. Type and/or severity of disability is important in deciding their certification level
 - d. Subjective evaluation of the student's ability to dive under certain conditions is important in deciding their certification level
 - e. All of the above

16. Deafness is very isolating and people with hearing impairments tend to be withdrawn in social situations, in groups of others with hearing impairments they:
 - a. Are never found in groups since they are so withdrawn
 - b. Many are very expressive and sociable, by learning some signing you can help bring them out in a regular class situation
 - c. Somewhat sociable, by attempting to learn signing you may offend them
 - d. None of the above

17. There are 3 types of hearing loss, conductive, sensori-neural, and Mixed (Conductive and Sensori-neural). Conductive is:
- Hearing loss from diseases of the inner ear that destroy nerve endings -- the most profound hearing loss.
 - Interference with the transmission of vibrations to the inner ear
 - Structural damage of the eardrum, accounting for 50% of all hearing loss
 - None of the above
18. Of our 5 senses vision provides us with:
- Approximately half of the information we receive about the world
 - Approximately 1/5th of the information we receive about the world
 - Our most efficient source of information about the world, approximately 84% of all the information we receive
 - No one knows how much information we receive through vision
19. Communication for the sight-impaired relies largely upon auditory information, which of the following are true;
- Since they are so dependent on the spoken word, no special consideration need to be given when lecturing
 - Information from auditory social cues, intonation, and hesitancy in someone's voice are the equivalent of body language
 - They are less dependent on detailed verbal explanations since they are listening more closely
 - They may be more aware of the precise use of language and are more dependent on verbal explanations
 - All of the above
20. For someone with a hearing impairment, lip reading is a valuable communication skill, which of the following is correct:
- For the skilled in lip reading, almost all the sounds of speech are visible if you speak clearly and do not exaggerate lip movements
 - Even to the very skilled in lip reading less than 1/3rd of the speech sounds can be detected visibly, so it is important to emphasize the sounds with lip movements
 - To the average person skilled in lip reading, about 1/2 the sounds of speech are visibly detected, which is plenty for normal conversation
 - Less than 1/3rd of the speech sounds can be visibly detected so it is necessary to maintain eye contact and speak clearly

21. Your student is a C-3 quadriplegic and is totally dependent on their buddy for descents, ascents, buoyancy control and swimming. The correct procedure for descending is:
 - a. Face your student and with one hand push their legs down, then hold their BCD straps and pull them close to you. Maintain eye contact and deflate your BCD, then theirs. Control buoyancy for a slow descent. Upon reaching the bottom, pull them into the prone position for swimming
 - b. Hold your student's BCD straps, push their legs down and pull them close to you, positioning them for a feet first descent. Maintain eye contact and release the air from your BCD, then begin descending by releasing the air from their BCD. Control buoyancy for a slow descent, stopping from time to time to clear ears. Reach the bottom neutrally buoyant and pull them into position for swimming
 - c. Face your student, hold their BCD straps and push their legs down. Maintain eye contact and release air from their BCD. Begin descent by releasing air from your BCD, control buoyancy for a slow descent, stopping when necessary to clear ears. Pull them into position for diving upon reaching the bottom.
 - d. Hold your student's BCD straps and push their legs down positioning them for a feet first descent. Establish their neutral buoyancy by releasing air from their BCD. Control buoyancy for a slow descent, reach the bottom neutrally buoyant and pull them into the prone position for swimming

22. There are an estimated 45,000 amputations per year, which of the following are correct; there may be more than one answer.
 - a. There are over 10 times lower extremity amputations than upper extremity amputations
 - b. There are three times more males than females that are subject to amputations
 - c. Upper extremity and AK amputees adapt to their disability better than BK amputees
 - d. BK amputees adapt well to prosthesis and are able to walk, but sometimes AK amputees do not and will use a wheelchair

23. Multiple Sclerosis, MS, is thought to be an autoimmune attack on the central nervous system, demyelinating nerve fibers; which of the following statements are incorrect?
 - a. MS is a progressive disease growing worse over time
 - b. People with MS are intolerant of heat and can become very exhausted with physical activity
 - c. People with MS have good judgment regarding their abilities
 - d. Symptoms vary from mild to severe with remissions and exacerbations

24. Your student is a T-2 complete paraplegic, he has made 3 training scuba dives in one day, is slightly chilled and has a headache that will not go away. Which of the following are correct?
 - a. Your student may be mildly hypothermic
 - b. Hyperreflexia increases the potential for hypothermia
 - c. Hypothermia cannot cause hyperreflexia
 - d. His headache may be caused by hyperreflexia

25. Cerebral Palsy (CP) is a disorder of the motor centers of the brain. A person with CP will exhibit:
 - a. Loss or impairment of control over voluntary muscles and reduced mental capacity
 - b. Ataxia, lack of balance due to lack of coordination and a slower learning ability
 - c. Spasticity and Athetosis, constant recurring series of slow involuntary movements that increase with cold & anxiety precluding them from scuba diving
 - d. Impairment of control over voluntary muscles with symptoms that vary from so mild they fit into normal society to so severe they require constant care

26. When scuba diving the urine collection bag is usually:
 - a. Worn inside the exposure suit
 - b. Removed for open water diving but sometimes worn in the swimming pool
 - c. Removed for open water diving and the swimming pool
 - d. Worn outside the exposure suit

27. Until the 1950's, all people with Cerebral Palsy were considered mentally deficient; however, new intelligence tests reveal that:
 - a. 75% are mentally deficient, 15% dull-normal and 10% normal
 - b. 25% are mentally deficient, 50% dull-normal and 25% normal
 - c. 50% are mentally deficient, 25% dull-normal, 25% normal and above
 - d. 25% are mentally deficient, 25% dull-normal, 50% normal and above

28. The stump (residual limb) requires several months to mature, at which time:
 - a. It reaches a steady state, shrinkage stops and it can be treated the same as an unaffected limb
 - b. It continues to shrink but can be treated the same as an unaffected limb
 - c. It reaches a steady state, but must be protected from injury at all times
 - d. Circulation has returned to normal and it is no longer subject to ulceration or decubiti

29. Spinal cord injuries cause decreased circulation in the affected areas that slow the healing process. This can:
 - a. Cause decubiti that take months to heal
 - b. Cause decubiti that require hospitalization
 - c. Cause decubiti from injuries to the affected areas
 - d. Cause decubiti when injuries, such as sunburn, bruises or scrapes, occur to the affected area
 - e. All of the above

30. Hemiplegia refers to paralysis of one side of the body. It is usually caused by:
 - a. Polio, Guillain-Barre or MS
 - b. Traumatic injury to the spinal cord
 - c. Congenital defects such as Spina Bifida
 - d. Brain trauma such as stroke, blood clot, injury or embolism

31. Hearing impairment is referred to as the "invisible" disability because:
 - a. The handicap is only observable when communication occurs
 - b. Of how they sound to others, stigma develops
 - c. The real handicap of deafness is impaired speech
 - d. They are sometimes misinterpreted as retarded due to speech distortions

32. The visually impaired person develops special facilities to receive information about the world, they may:
 - a. Develop the capacity to "feel" objects
 - b. Develop "tactile" vision, enabling them to explore the environment by touch
 - c. Have a greater sense of dimensionality -- able to obtain "tactile" information from all sides of an object, integrate the images and thereby appreciate all sides simultaneously
 - d. Develop the capacity to "hear" objects
 - e. All of the above

33. A person with paralysis of the legs may have difficulty donning protective clothing (wet suit). Solutions to this problem are: (there may be more than one answer)
- Use a loose-fitting wetsuit, lubricate the inside of the suit and help them pull it on
 - Lubricate the inside of the suit, use plastic sandwich bags over hands & feet
 - Use a loose-fitting gusseted wetsuit with zippers along the legs, hips, torso and arms that 'tuck' the neoprene into a proper tight fitting wetsuit
 - Lubricate the inside of the suit, have zippers installed in the wetsuit legs, hips and arms. Assist them by helping them pull it on
34. Muscular Dystrophy (MD) refers to a group of neuromuscular diseases that:
- May produce progressive loss of muscular strength, reduce life expectancy, cause lung scarring, and personality, memory, learning and judgment disorders
 - Does produce progressive loss of muscular strength, and may result in lung scarring
 - Does cause progressive loss of muscular strength in the face, shoulders and upper arms. In some cases life expectancy may be shortened, and there may be physical disabilities, but otherwise they are normal and fit for diving
 - May cause judgment, learning and memory disorders
35. Swimming underwater presents the mobility-impaired diver with problems of balance and mobility. These problems can be solved by:
- Repetitive training exercises designed to develop balance control and swimming techniques
 - Careful distribution of weights, placing most of the weight forward in the weight system, with small amounts at the knee, for paras or quads, or at the chest for leg amputees
 - Careful distribution of weights, snug fitting BCD, buoyancy control, and repetitive training exercises designed to develop balance control and swimming techniques
 - None of the above
36. Scar tissue is more prone to develop decompression sickness than normal tissue. For spinal cord injured divers:
- This would not apply since the spinal cord is protected by a myelin sheath
 - There is a possibility that the area of injury may be more prone to develop decompression sickness and cause further damage to the spinal cord
 - There is the possibility that the area of injury may be more prone to develop decompression sickness and cause further damage to the spinal cord. It is therefore advised that a margin of safety be used when using dive tables
 - It is of no concern since only one case has been reported where a spinal cord injured diver developed decompression sickness while diving within the no decompression limits
37. At the surface, a paraplegic diver will often experience difficulty with:
- Swimming in the prone position
 - Getting their legs under them to attain an upright position, so they can communicate and descend
 - Turning onto the prone position
 - Orally inflating their BCD
 - All of the above

38. Various disabilities can result in thermal control irregularities such as:
- Tendency toward chilling due to inability to sweat and loss of extremities
 - Over-heating due to reduced circulation and loss of extremity
 - Over-heating due to inability to sweat, tendency toward chilling due to loss of extremities and reduced circulation
 - Over-heating due to loss of extremities, over-heating due to loss of ability to sweat, tendency toward chilling due to reduced circulation
 - None of the above
39. Accessibility considerations for resorts, classroom and pool facilities include:
- Parking spaces wide enough to get their wheelchairs in and out, curb cuts near access to building, and walkways and ramps wide enough for a wheelchair (48in/120cm)
 - Entryways at least 32in/80cm wide, bathroom doors should open out, pool deck wide enough (5 ft/1.6 m) to maneuver wheelchairs and adjacent to dressing rooms
 - Shower regulators within reach when seated in wheelchair, shower entry is level, and the pool heated to 85F/30C
 - Doors opening into a room require a clear space of 36 inches/90cm next to door on the side nearest the door knob or level.
 - All of the above
40. PTSD, Post Traumatic Stress, classified as an Anxiety Disorder, occurs in response to traumatic events when people experience strong emotional symptoms. Which of the following is not true?
- Functioning in an environment that provides understanding, safety and emotional support is primary toward re-claiming ones pre-trauma self. Methods for managing fear, the primary building block of PTSD, are available in therapy. Scuba training that requires control over fear, such as mask removal and buddy breathing, Scuba travel & socializing may also help.
 - PTSD is a relatively new anxiety disorder with much of what is known coming from studies of Vietnam War Veterans, and is found almost exclusively in recent combat veterans.
 - Someone that is irritable, on-edge and subject to out bursts of crying, may be suffering from PTSD.
 - Traumatic events that can cause PTSD are exposure to combat, a life threatening illness, loss of a loved one, rape, loss of a limb, seeing others injured & dying and child abuse.
41. Beach diving presents the mobility-impaired diver with natural barriers, namely stairs and sand. Which of the following are correct?
- Avoid stairs and wide sandy beaches when possible, but if a good dive site lies on the other side, go for it.
 - Stairs can be negotiated either by helping the person down in their chair or by carrying them down.
 - Sand can be crossed by, creating a surface for wheelchairs to roll on, or scooting across the sand on their own power
 - The person in the wheelchair can help control their descent by pulling back on the push rims of their chair. Some may get out of their wheelchair and go down the stairs themselves
 - All of the above

42. For the mobility-impaired diver, exiting the water onto a boat after diving is best done by:
- Taking off their scuba equipment in the water, in this order: face mask and snorkel, BCD and tank and weight belt. Then have two helpers onboard hold them by their arms and pull them up onto the dive platform
 - Two helpers onboard hold the diver by their wrists, with the diver facing them, and pull the diver onboard with all the equipment in place except their weight system
 - Take off their scuba equipment in the water in this order: weights, BCD & tank, leave mask & snorkel in place. Then, with the diver facing the boat, the in-water buddy assists by holding the diver's legs above the knees, then kicks with their fins pushing the diver up, while the helper onboard assists by lifting under their arms onto the dive platform
 - Take off their scuba equipment in the water in this order: weights, mask & snorkel, BCD and tank. With the diver facing the boat, have one helper assist by holding the divers legs and pushing from below while the helper onboard pulls the diver onto the dive platform
43. Spina Bifida occurs when the neural tube fails to develop or close properly. Which of the following are true?
- Myelomeningocele can result in learning disabilities and seizure disorders.
 - Some people with Occulta don't know they have it.
 - Meningocele may result in spinal cord nerve damage.
 - Symptoms may include loss of motor and/or sensory function, bladder and/or bowel control, reduced circulation and potential for developing decubiti.
44. What makes HSA the leader in Disabled Diving?
- The decision to create alternative Performance Requirements was made by Jim Gatacre after 2 years of training and diving with divers with disabilities.
 - The decision to create alternative Performance Requirements for divers with disabilities was the result of a 3 day workshop by the Disabled Divers Standards Committee chaired by Denise Graver, PADI Education Specialist and attended by underwater educators from NAUI & YMCA.
 - Divers with disabilities certified by certifying agencies worldwide, such as NAUI, SSI, & CMAS, developed ideas on Performance Requirements based on their own experience & submitted them for approval to these agencies. HSA adopted these standards.
 - The HSA Performance Requirements are the result of over two years of in-water development by the HSA, submitted to a committee of 4 underwater educators from PADI & NAUI for evaluation, comments and approval.
45. Accessibility means that a person in a wheelchair can, without assistance, conveniently access and use all available facilities. Good examples of accessibility requirements are:
- Parking spaces near curb cuts, smooth level walkways, doors that open out, and lever controls on shower
 - 32 inch/80cm doors that open in with 36-inch/90cm space next to the door nearest the door handle, and roll-in shower with hand held showerhead
 - Five (5) degree ramps to elevated areas, 22in/55cm high beds, hard packed sandy beach, and 36in/90cm space next to the toilet
 - Elevator, phone next to the bed, thresholds level with the floor, 5ft/150cm x 10ft/300cm balcony, light control height 40in/100cm and wash basin height 29in/75cm.
 - All of the above
46. At the surface the hearing-impaired scuba diver must:
- Remain within reach of their dive buddy
 - Always hold onto their dive buddy
 - Maintain visual contact with their dive buddy
 - Always hold onto their dive buddy and maintain visual contact

47. Not all dive boats are as accessible as we would like, however diving independence means:
- Diving those boats with specifications that meet the individual needs of the handicapped diver
 - Diving most boats, but stay within your physical limitations
 - Diving any boat, when barriers can be overcome, with safety as well as pleasure
 - Commercial dive boats are not for most handicapped divers; private boats and special charters are best
48. For the mobility-impaired diver, entering the water from a boat or a pool deck usually follows which procedure:
- The individual is positioned either under their own power or with assistance, at the point of entry, their dive buddy brings their equipment to them and assists in any way necessary in donning it, and then the individual makes a modified front roll, or back roll, entry
 - The individual dons their equipment and moves to the point of entry, either under their own power or with assistance, and makes a modified front roll, or back roll, entry
 - The individual enters the water; their equipment is brought to them and, with whatever assistance necessary, they do it
 - The individual is positioned either under their own power or with assistance, at the point of entry, their equipment is brought to them, and with whatever assistance necessary they do it. With experienced divers on each arm, they enter the water using a front roll
49. The two HSA films made with Jean-Michel Cousteau & his father Jacques-Yves Cousteau are very significant films and demonstrate a large number of scuba skills and equipment important to divers with disabilities. Which of the following statements are true?
- Jean-Michel Cousteau appeared in the classic film, Freedom in Depth, only after his father approved his unprecedented involvement in an organization outside the Cousteau Society.
 - Jacques Cousteau loved swimming underwater, and had always wanted to scuba dive.
 - It is common for the Cousteau's to appear in films for organizations that have worthy philanthropic purposes.
 - Jacques Cousteau had wanted to be an aero-pilot, but he was involved in a terrible traffic accident that left him broken and paralyzed and he was unable to realize his dream of becoming a pilot.
50. You are going to dive in Hawaii with new dive buddies. One buddy is certified Level C Open Water Scuba Diver, and her husband who is able-bodied, has been recently certified Open Water Scuba Diver by an internationally recognized diver training agency. He has a total of nine scuba dives performed in an inland quarry. She has been diving for three years and has logged a total of 126 scuba dives in various open ocean environments. Your dive plan will include the following: (It may require more than one answer)
- You & her husband breathe from each other's alternate second stage air source, and plan the dive according to the comfort level of the Level C diver
 - You are comfortable with your own skills regarding the assistance you will provide the C level diver, and the dive plan clearly defines depth, duration, hand signals and the option for the Level C diver to terminate the dive at any time
 - The dive plan is based primarily upon the husband's scuba diving experience and comfort level of the Level C diver, and clearly defines emergency procedures for all members of the dive team.
 - The dive plan clearly defines the emergency procedures the Level C diver in the event that any one member were to have an emergency, and all members of the buddy team know how to operate every other member's BCD