

# **National Marine Manufacturers Association**

## **Compliance Specialist Exam**

### **Seat Structures (2022 MY)**

#### **ABYC H-31 (7/20)**

1. Type A and Type B seat assemblies shall be tested as installed on the boat or:
  - a. A test substrate as described by the H-31 standard
  - b. On a test platform that at least structurally replicates the mounting surface to which the final seat assembly is attached.
  - c.  $\frac{3}{4}$ " plywood
  - d. Both A and B are correct
  
2. Seats with a vertical adjustment feature shall be tested with the seat in its \_\_\_\_ height position.
  - a. Minimum
  - b. Middle-range
  - c. Maximum
  - d. Any of the above
  
3. Per H-31, designated occupant positions are standing or seated areas with a minimum width of \_\_\_\_ designed to be occupied \_\_\_\_\_.
  - a. 12 inches; at all boat speeds in excess of 5 mph
  - b. 16 inches; all boat speeds in excess of 5 mph
  - c. 12 inches; at all boat speeds
  - d. 16 inches; at all boat speeds
  
4. Solid wood and plywood structural members shall be selected or treated to resist decay in a marine environment and be classified to meet:
  - a. Exterior C-CPTS
  - b. ASTM B117
  - c. Salt Spray Testing
  - d. ASTM 4329
  
5. With the exception of an operator swivel seat, seat swivel locking mechanisms, when locked, shall not rotate relative to the seat base when subjected to a torque of 30 foot pounds.
  - a. True
  - b. False

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6. Part of the overall testing requirements for the back of multi-person seat assemblies requires that a load of 253 lbf shall be applied to the seat back for 5 minutes without any loss of function. For a two person seat this means that the force being applied is:
  - a. 150 lbf at each occupant position (253 lbf total), with the forces applied simultaneously
  - b. 253 lbf at each occupant position (506 lbf total), with the forces applied simultaneously
  - c. 150 lbf at each occupant position (253 lbf total), with the force being applied to one position at a time
  - d. 253 lbf at each occupant position (506 lbf total), with the force being applied to one position at a time
  
7. Type A and B seats shall withstand without failure or loss of function, a dynamic gravity load of \_\_\_\_ released from a \_\_\_\_ height. This test shall be repeated two times on the same specimen without failure or loss.
  - a. 150 lbs; 9 inch
  - b. 150 lbs, 12 inch
  - c. 400 lbs; 9 inch
  - d. 400 lbs; 12 inch
  
8. A seat attachment test is required to be done to determine the strength of the seat assembly's mounting surface. Regarding the fastener pullout test, which of the following is correct:
  - a. The test may be completed on either the boat or a sample representative of the mounting surface
  - b. Each fastener's installation shall be able to withstand an axial force of 750 lbf
  - c. Is not required if the other seat testing has been completed by the seat's manufacturer
  - d. Both A and B
  
9. Leaning posts are intended to provide body support at a standing designated occupant position while underway and may not be designed to be used as a seat, they are not covered by ABYC H-31 and thus have no testing requirements.
  - a. True
  - b. False
  
10. Armrests of both Type A and B seat assemblies shall be designed to withstand without failure the application of a \_\_\_\_ vertical static load per the specified testing requirements within H-31.
  - a. 150 lb
  - b. 200 lb
  - c. 250 lb
  - d. 350 lb