U.S.C.G. Merchant Marine Exam

QMED

Q802 Electrician

(Sample Examination)
Choose the best answer to the following Multiple Choice Questions

1. In actual applications, electrical connections associated with "R1, R2 and R3" of the transmitter to "R1, R2, and R3" of the indicators shown in figure "C" of the illustration are made by what means? Illustration EL-0092
   - (A) slip rings and brushes
   - (B) soldered contacts
   - (C) spliced and taped connections
   - (D) solderless crimp-on connectors

   *If choice A is selected set score to 1.*

2. A digital multimeter is set up as an ohmmeter. What does a display reading of "OL" ohms as read across the ends of a wire conductor indicate?
   - (A) open circuit
   - (B) meter is offline
   - (C) a partial short
   - (D) a partial ground

   *If choice A is selected set score to 1.*

3. Which one of the following is a difference between a typical relief valve and a typical safety valve?
   - (A) A relief valve gradually opens as pressure increases above setpoint pressure whereas a safety valve fully opens at the setpoint pressure.
   - (B) The blowdown of a relief valve is greater than the blowdown of a safety valve.
   - (C) The actuator closing spring on a relief valve is in a compressed state whereas the actuator closing spring on a safety valve acts in tension.
   - (D) Relief valves are capable of being gagged whereas safety valves are not.

   *If choice A is selected set score to 1.*

4. What may be the cause of an AC generator to fail to produce a voltage?
   - (A) a tripped bus circuit breaker
   - (B) speed of the rotor too fast
   - (C) short circuit in the stator coils
   - (D) an open in the rotor field circuit

   *If choice D is selected set score to 1.*
5. What is a useful instrument for checking 3-phase AC motor performance by measuring possible unbalanced currents?

- (A) hand or battery-operated megger
- (B) clamp-on ammeter
- (C) vibrating-reed frequency meter
- (D) D’Arsonval iron-vane probe

If choice B is selected set score to 1.

6. As shown in the illustrated wound-rotor induction motor, how is the direction of rotation of the motor reversed? Illustration EL-0148

- (A) Any two of the "T1, T2, and T3" leads are reversed only.
- (B) Any two of the "M1, M2, and M3" leads are reversed only.
- (C) Any two of the "T1, T2, and T3" leads are reversed and any of the two "M1, M2, and M3" leads must be reversed as well.
- (D) It is not possible to change the direction of rotation of a wound-rotor induction motor.

If choice A is selected set score to 1.

7. Before primers and finish coats may be applied to a metal surface, the surface must be properly prepared. What statement is true concerning surface preparation?

- (A) All dirt, oil, grease, rust, mill scale, and loose paint must be removed.
- (B) Dirt, oil and grease must be removed. Rust and mill scale may remain.
- (C) All previous paint must be removed.
- (D) All dirt, rust and mill scale must be removed. Oil and grease can remain.

If choice A is selected set score to 1.

8. The blade for a power hacksaw should be installed with the teeth __________.

- (A) pointing either toward or away from the motor end of the machine
- (B) pointing toward the motor if using a 4 or 6 tooth blade and away from the motor if using a 10 or 14 tooth blade
- (C) pointing away from the motor end of the machine
- (D) pointing toward the motor end of the machine

If choice D is selected set score to 1.

9. Portable Halon extinguishers used on a class "B" fire should be directed __________.

- (A) at the base of the fire near the edge
- (B) at the top of the flames
- (C) in short, quick bursts
- (D) toward the upwind side of the fire

If choice A is selected set score to 1.
10. Which of the following statements describes the difference between the primary windings and the secondary windings of an ideal 2:1 stepdown voltage transformer?

- (A) The secondary windings use smaller wires than the primary windings.
- (B) The secondary windings can only provide half as much current as the primary windings.
- (C) The secondary windings have half as many turns as the primary windings.
- (D) The secondary windings have twice as much resistance as the primary windings.

If choice C is selected set score to 1.

11. In comparing a semiconductor diode to a vacuum tube diode, what statement is true?

- (A) The semiconductor diode has longer life, longer warmup time and is less delicate than the vacuum tube diode.
- (B) The semiconductor diode has shorter life, no warmup time, and is less delicate than the vacuum tube diode.
- (C) The semiconductor diode has longer life, no warmup time, and is more delicate than the vacuum tube diode.
- (D) The semiconductor diode has longer life, no warmup time, and is less delicate than the vacuum tube diode.

If choice D is selected set score to 1.

12. The most important reason for taking anti-seasickness pills as soon as possible after entering a life raft is to __________.

- (A) assist in sleeping
- (B) reduce appetite by decreasing nausea
- (C) prevent loss of body moisture by vomiting
- (D) prevent impaired judgment due to motion-induced deliriousness

If choice C is selected set score to 1.

13. If rotor-to-stator air gap readings for an electrical generating machine have changed significantly from the last reading, what should be checked?

- (A) the generator bearings for wear
- (B) insulation readings and machine cleanliness
- (C) the prime mover thrust bearing for wear
- (D) the field coil bolts for the proper torque values

If choice A is selected set score to 1.
14. Screwdrivers designed for electrical use should have __________.
   o (A) longer than normal shanks
   o (B) larger than normal shanks
   o (C) shorter than normal shanks
   • (D) insulated handles

   *If choice D is selected set score to 1.*

15. How is the difference between the synchronous speed of a three-phase induction motor and its operating speed correctly expressed?
   o (A) a percent of full load speed
   o (B) a decimal fraction of full load speed
   • (C) slip
   o (D) deviation

   *If choice C is selected set score to 1.*

16. An AC generator produces 60 Hz at 1800 RPM. If the generator speed is increased to 1830 RPM, what will happen to the frequency in Hz?
   o (A) decrease to 59 Hz
   o (B) remain at 60 Hz
   • (C) increase to 61 Hz
   o (D) increase to 63 Hz

   *If choice C is selected set score to 1.*

17. The setpoint current at which a magnetic-type overload relay tends to trip may be increased by turning the dashpot in the "lower" direction. What effect will this action have?
   o (A) reduces magnetic force on the plunger and requires less current to trip the relay
   • (B) reduces magnetic force on the plunger and requires more current to trip the relay
   o (C) increases magnetic force on the plunger and requires more current to trip the relay
   o (D) increases magnetic force on the plunger and requires less current to trip the relay

   *If choice B is selected set score to 1.*

18. In testing a three-phase delta-connected winding for an open circuit using an ohmmeter, what must be done?
   o (A) measure the voltage across the open connections while testing
   o (B) test the windings as parallel groups to avoid short circuiting
   • (C) if possible, open the delta-connections to avoid shunting the phase being tested
   o (D) test each phase with all connections intact

   *If choice C is selected set score to 1.*
19. You have found a person laying prone and not breathing. An electric wire is touching the victim. Which of the actions listed is the FIRST thing you should do?

- (A) Leave the accident scene and summon medical assistance.
- (B) Shut off power or remove the wire from the victim.
- (C) Immediately begin artificial respiration.
- (D) Immediately begin cardiac massage.

*If choice B is selected set score to 1.*

20. At a minimum threshold, how many milliamps of current through the body produces a condition where most people would suffer ventricular fibrillation and could only be resuscitated with a ventricular defibrillator?

- (A) 3 to 7 mA
- (B) 10 to 16 mA
- (C) 30 mA
- (D) 75 mA for 5 sec.

*If choice D is selected set score to 1.*

21. Under what circumstance would a hand-held portable phase sequence indicator be used should the main switchboard mounted fixed phase sequence indicator be inoperative?

- (A) preparing to make the shore power connection
- (B) replacing a defective solenoid
- (C) paralleling alternators
- (D) installing a new synchroscope

*If choice A is selected set score to 1.*

22. In general, what type of starter would be used to connect a three-phase induction motor to full line voltage at the instant of start-up?

- (A) across-the-line starters
- (B) VFD starters
- (C) resistor starters
- (D) autotransformer starters

*If choice A is selected set score to 1.*

23. What is the functional name of an electrical device which prevents simultaneous energization of loads thereby preventing damage or injury?

- (A) electrical interlock device
- (B) mechanical limit device
- (C) monitoring device
- (D) modulating device

*If choice A is selected set score to 1.*
24. When replacing fuses, what practice should be observed?

- (A) to increase the fuse rating 10% to guard against 'nuisance blowing'
- (B) to use insulated pliers or screwdriver
- (C) the fuse clips are straight, tight, and in good contact
- (D) to stand on a rubber mat and use rubber gloves

*If choice C is selected set score to 1.*

25. If the centrifugal switch or relay used for cutting out the starting winding of a split-phase induction motor fails to open once the motor is in operation, what will be the result?

- (A) the motor torque will be above normal at rated speed
- (B) the motor will overspeed
- (C) the starting winding will burn out
- (D) the motor will immediately stall under load

*If choice C is selected set score to 1.*

26. If a sea water-cooled shell-and-tube lubricating oil cooler has the sea water inlet and outlet connections on the opposite end waterboxes, in terms of the number of passes, what statement is true?

- (A) The tube-side fluid flow pattern is two-pass.
- (B) The tube-side fluid flow pattern is four-pass.
- (C) The number of fluid passes cannot be determined.
- (D) The tube-side fluid flow pattern is single-pass.

*If choice C is selected set score to 1.*

27. It is necessary to cool the bulkheads and decks surrounding a compartment where there is a fire in order to __________.

- (A) prevent oxygen from reaching the flames
- (B) prevent the fire from spreading by the conduction of heat
- (C) form a dense coating of smothering steam
- (D) cool the metal below its ignition temperature

*If choice B is selected set score to 1.*
28. During start-up of the circuit shown in figure "B" of the illustration, it is noted that the ends of component "4" alternately glow and become dark without the tube illuminating. What is the most probable cause for this condition? Illustration EL-0081

- (A) component "2" is loose and due to the ship's vibrations makes and breaks contact
- (B) the power system's voltage is fluctuating in and out of the range necessary for proper operation
- (C) component "3" is shorted and therefore unable to produce the high voltage required to start the lamp
- (D) component "5" contacts are opening and closing thus prohibiting sufficient current flow

If choice C is selected set score to 1.

29. Electric current is the flow of electrons through a conductor. How is the rate of this flow measured?

- (A) amperes
- (B) ohms
- (C) watts
- (D) volts

If choice A is selected set score to 1.

30. An AC generator operating in parallel loses its excitation without tripping the circuit breaker. What will be the result?

- (A) It will cause the slip rings to melt.
- (B) It will increase the output amperage between the armature and the bus.
- (C) It will not affect the faulty generator due to the compensation of the other generators.
- (D) It will cause high currents to be induced in the field and stator windings.

If choice D is selected set score to 1.

31. During fueling operations oil is detected in the water adjacent to your vessel. If however, it is determined to be from some source other than your vessel, you should __________.

- (A) notify the Coast Guard
- (B) secure operations until the exact type of oil is determined
- (C) make an entry in the Oil Record Book to that effect
- (D) all of the above

If choice A is selected set score to 1.
32. In terms of the battery electrolyte, when performing maintenance of alkaline batteries what should be done?

- (A) wear protective gloves and goggles when handling electrolyte
- (B) replace the electrolyte every 5 years
- (C) check the electrolyte weekly using a hydrometer
- (D) replace the electrolyte when the volts per cell drops below 1.8 VDC

*If choice A is selected set score to 1.*

33. When troubleshooting a magnetic controller, it is found that the contacts are welded together. What is the most probable cause?

- (A) excessive operation at low load
- (B) high ambient temperature
- (C) high voltage on the operating coil
- (D) low voltage on the operating coil

*If choice D is selected set score to 1.*

34. When renewing spiral packing in a centrifugal pump stuffing box, the packing gland nuts should be

- (A) loosened until the gland clears the stuffing box
- (B) first tightened, and then backed off, start pump, and while running under normal conditions; tighten evenly and slightly, over time
- (C) left in that position
- (D) tightened an additional 10% to compress the packing

*If choice B is selected set score to 1.*

35. In terms of consistency (or "stiffness"), what is the most common grade of grease for most marine applications as set forth by the National Lubricating Grease Institute (NLGI)?

- (A) NLGI 000
- (B) NLGI 0
- (C) NLGI 2
- (D) NLGI 6

*If choice C is selected set score to 1.*
36. If you were uncertain as to what type of gasket material to install in a pipeline, you should 
   __________.
   o (A) make up the joint without a gasket until you can check with the chief
   • (B) check the ship's plans or manufacturer's instructions
   o (C) turn the old gasket over and install it again
   o (D) leave the old gasket in and cover it with Permatex

   If choice B is selected set score to 1.

37. If a delicate component must be soldered into a circuit, how can the component be protected from 
   the heat of the soldering process?
   o (A) coating the leads to be soldered with a light oil film
   o (B) pre-oxidizing the leads to be soldered
   • (C) using a thermal shunt heat sink
   o (D) operating the soldering gun not more than 60 seconds at a time

   If choice C is selected set score to 1.

38. A capacitor is to be tested with a digital multimeter set up to measure ohms. If the meter is 
   connected to a shorted capacitor, how would the meter display respond?
   o (A) immediately display a very low resistance with the value then continuously rising to a value of 
   OL
   o (B) immediately display a value of OL with the value then continuously dropping to a low value
   o (C) immediately display a value of OL which remains at OL
   • (D) immediately display a very low resistance value which remains low

   If choice D is selected set score to 1.

39. What is the combined effect of inductive reactance, capacitive reactance, and resistance in an 
   alternating current circuit known as?
   o (A) total reactance
   o (B) resonance
   o (C) reactance
   • (D) impedance

   If choice D is selected set score to 1.
40. For what purpose is the variable resistance placed in the rotor circuit of a wound-rotor induction motor provided?
   - (A) vibration control
   - (B) frequency control
   - (C) voltage control
   - (D) speed control

   *If choice D is selected set score to 1.*

41. After extinguishing a paint locker fire using the fixed CO₂ system, the next immediate action is for the space to be __________.
   - (A) opened and burned material removed
   - (B) opened and doused with water to prevent reflash
   - (C) checked for the proper oxygen level
   - (D) left closed with ventilation off until all boundaries are cool

   *If choice D is selected set score to 1.*

42. What is a common type of protective covering used on electrical conductors?
   - (A) rubber or plastic
   - (B) plain paper
   - (C) silver sheathing
   - (D) Babbitt sheathing

   *If choice A is selected set score to 1.*

43. What is the voltage across "R₁" of figure "B" of the illustrated circuit with the switch closed if the applied voltage is 24 volts and resistance of R₁ is 3 ohms, R₂ is 4 ohms, and R₃ is 5 ohms, respectively? Illustration EL-0020

   - (A) 2 volts
   - (B) 6 volts
   - (C) 8 volts
   - (D) 10 volts

   *If choice B is selected set score to 1.*

44. The illustrated hydraulic pump graphic symbol is used to depict a __________. Illustration GS-0097

   - (A) series-flow pump unit
   - (B) combined pump unit
   - (C) double pump unit
   - (D) two-stage pump unit

   *If choice C is selected set score to 1.*
45. In a compression type automatic grease cup, the lubricant is forced into the bearing by __________.
   - (A) gravity flow
   - (B) a pressure gun
   - (C) a Zerk fitting
   - (D) spring force
   
   If choice D is selected set score to 1.

46. As shown in figures "B" and "C" of the illustration, what should be the switch position and which test lead terminal jacks should be used if your intent is to measure DC currents anticipated as high as 200 milliamps? Illustration EL-0047
   
   - (A) switch position "6" and terminal jacks "1 and 4"
   - (B) switch position "6" and terminal jacks "2 and 4"
   - (C) switch position "7" and terminal jacks "2 and 4"
   - (D) switch position "7" and terminal jacks "1 and 4"
   
   If choice A is selected set score to 1.

47. What is the alarm signal for manning boat stations or boat drills onboard a merchant ship?
   
   - (A) Continuous blast of the whistle for not less than 10 seconds supplemented by the continuous ringing of the general alarm bells for not less than 10 seconds.
   - (B) Continuous blast of the whistle for not less than 3 seconds supplemented by the continuous ringing of the general alarm bells for not less than 3 seconds.
   - (C) General alarm sounded 3 times supplemented by 3 short blasts of the whistle.
   - (D) A succession of more than 6 short blasts followed by 1 long blast of the whistle supplemented by a comparable signal on the general alarm.
   
   If choice D is selected set score to 1.

48. What does "G" represent in the illustration? Illustration GS-0017
   
   - (A) A dimension tabulated elsewhere.
   - (B) The surfaces to be ground.
   - (C) The type of material used for the piece.
   - (D) A reference note shown elsewhere.
   
   If choice B is selected set score to 1.
49. In the system shown in the illustration, the engine room station is unable to signal any other station, nor is any other station able to signal the engine room station. The engine room station can, however, ring itself by proper positioning of its selector switch. What is the most probable cause of this problem? Illustration EL-0093

- (A) The selector switch is grounded at the problem station diverting current from the other stations' ringing devices.
- (B) The coil of component "C" of the problem station is open-circuited.
- (C) There is an open between terminal "C" of the problem station and the common wire of the multi-conductor cable to the other stations.
- (D) The switch at component "A" of the problem station is stuck open.

*If choice C is selected set score to 1.*

50. In a three-phase, squirrel-cage type, induction motor, how is the primary rotating magnetic field established?

- (A) interaction of the magnetic field caused by the induced current in the squirrel-cage bars with the magnetic field of the stator
- (B) application of a three-phase AC voltage supply to the stator windings
- (C) current induced in the rotor windings
- (D) laminated steel core and aluminum conductors in the rotor

*If choice B is selected set score to 1.*

51. After an emergency shoring installation has been completed, the ________.

- (A) timbers are nailed in place to prevent looseness
- (B) repair is completed and no further action is needed
- (C) shoring should be frequently inspected for looseness
- (D) damaged plating should be straightened by heating

*If choice C is selected set score to 1.*

52. The electrolyte used in a nickel-cadmium battery is distilled water and what other substance?

- (A) potassium hydroxide
- (B) diluted sulfuric acid
- (C) lead sulfate
- (D) zinc oxide

*If choice A is selected set score to 1.*
53. To prevent blowback when attempting to light off an idle boiler, what statement is true?

- (A) The boiler fuel oil supply header temperature must be maintained at the temperature necessary to obtain proper atomization of the fuel, the furnace floor should be free of oil, and the furnace should be purged.
- (B) The boiler fuel oil supply header temperature must be maintained at the temperature necessary to obtain proper atomization of the fuel, the furnace floor should be free of oil, and there should be sufficient combustible gases in the furnace.
- (C) The boiler fuel oil supply header temperature must be maintained above the flash point of the fuel, the furnace floor should be free of oil, and there should be sufficient combustible gases in the furnace.
- (D) The boiler fuel oil supply header temperature must be maintained below the pour point of the fuel, the furnace floor should be free of oil, and the furnace should be purged.

If choice A is selected set score to 1.

54. What is the power consumed by "R2" in the circuit illustrated in figure "B", if the applied voltage is 24 volts and the resistance of R1 is 3 ohms, R2 is 4 ohms, and R3 is 5 ohms, respectively? Illustration EL-0020

- (A) 16 watts
- (B) 20 watts
- (C) 24 watts
- (D) 28 watts

If choice A is selected set score to 1.

55. Consider a series circuit employing two resistors. What is true about the resistance value of the second resistor compared to the first when the voltage drop across the first resistor is one-half the source voltage?

- (A) the second resistor has a resistance value relative to that of the first which cannot be determined
- (B) the second resistor has a resistance value equal to that of the first
- (C) the second resistor has a resistance value double that of the first
- (D) the second resistor has a resistance value that is half of the first

If choice B is selected set score to 1.
56. Which of the following methods should be used to test for an 'open' stator winding coil in a wye-connected AC squirrel cage induction motor?

- (A) Use an ohmmeter, placing the test leads across each pair of disconnected motor leads in succession and compare resistances.
  - (B) Use a growler, listening for noise and vibration levels to increase when the growler blade is positioned over an open stator coil.
  - (C) Use an ohmmeter, placing one test lead on the shaft and the other to each of the disconnected motor leads in succession and compare resistances.
  - (D) Use a growler, listening for noise and vibration levels to diminish when the growler blade is positioned over an open stator coil.

*If choice A is selected set score to 1.*

57. Suppose a remote valve operator is fitted with a gearbox. What is the purpose of the gearbox?

- (A) The gearbox may be used to change the orientation of the handwheel to the valve stem, or it may be used to reduce the turning effort, but NEVER both.
- (B) The gearbox may be used to change the orientation of the handwheel to the valve stem, or it may be used to reduce the turning effort, OR both.
- (C) The gearbox is strictly used to reduce the turning effort. The gearbox is never used to change the orientation of the handwheel to the valve stem.
- (D) The gearbox is strictly used to change the orientation of the handwheel to the valve stem. The gearbox is never used to reduce the turning effort.

*If choice B is selected set score to 1.*

58. If a three-phase induction motor is operated under a light load and it develops an open in one of its supply lines, what will be the result?

- (A) the motor will speed up due to the reduced number of poles
- (B) the motor will stop
- (C) the motor will continue to run, but will vibrate and have reduced torque
- (D) the motor will run cooler due to reduced current flow

*If choice C is selected set score to 1.*

59. In general, how are nickel-cadmium storage batteries superior to lead-acid batteries?

- (A) they put out higher voltages and require no maintenance
- (B) they need fewer cells in series and use less mounting space
- (C) they are less costly to replace
- (D) they can remain idle and keep a full charge for a long time

*If choice D is selected set score to 1.*
60. You are paralleling two alternators. The synchronizing lamps grow dim and are totally darkened as the synchroscope pointer approaches the 0° position. What does this indicate?

- (A) the incoming alternator is running too slowly
- (B) the alternator voltages are 180° apart
- (C) the circuit breaker can be closed
- (D) the synchroscope is defective or broken

*If choice C is selected set score to 1.*

61. An electrical connection between the wiring of an electric motor and its metal frame is known as what?

- (A) eddy current
- (B) flux leakage
- (C) impedance
- (D) ground

*If choice D is selected set score to 1.*

62. What type of eye protection affords the best protection from severe exposure to airborne impact hazards?

- (A) Side-shielded safety glasses
- (B) Full-face shield and safety goggles
- (C) Full-face shield
- (D) Eyecup or cover-type safety goggles

*If choice B is selected set score to 1.*

63. A bearing using an oiling ring as a means of static oil feed must occasionally be serviced by removing the wear particles, grit, and moisture. How is this accomplished?

- (A) Draining the bottom of the strainer housing.
- (B) Rotating the handle of the lube oil strainer.
- (C) Changing the filter element.
- (D) Draining the bottom of the bearing lube oil sump.

*If choice D is selected set score to 1.*

64. Whether using a centrifuge or a simple filter, oil cleaning and filtration will be the most effective when the oil is at a __________.

- (A) high temperature and a high viscosity
- (B) high temperature and a low viscosity
- (C) low temperature and a high viscosity
- (D) low temperature and a low viscosity

*If choice B is selected set score to 1.*
65. Before electrical work can be safely undertaken, the equipment must be de-energized, locked and tagged out, and verification must be made that the circuit is actually dead. What testing device is most certain to reliably verify that a circuit is actually dead?

   - (A) a non-contact voltage tester
   - (B) a solenoid type voltage tester
   - (C) an autoranging digital multimeter
   - (D) a non-autoranging digital multimeter

   If choice C is selected set score to 1.

66. The principle personnel hazard unique to Halon fire extinguishers is __________.

   - (A) skin irritation
   - (B) inhaling toxic vapors produced when exposed directly to a flame for extended periods
   - (C) displacement of oxygen
   - (D) eye irritation produced immediately after discharge from cylinder

   If choice B is selected set score to 1.

67. Which of the following conditions would most likely lead to the failure of a resistor due to overheating?

   - (A) Resistor wattage rating four times higher than that required for the circuit.
   - (B) Resistor wattage rating two times higher than that required for the circuit.
   - (C) Resistor wattage rating one-half that required for the circuit.
   - (D) Resistor wattage rating equal to that required for the circuit.

   If choice C is selected set score to 1.

68. In the illustrated views of a lead-acid battery as shown in figures "A" and "B", what battery component has the sole function of preventing the individual plates in the negative plate group from coming into direct contact with the individual plates in the positive plate group? Illustration EL-0031

   - (A) casing
   - (B) cell dividers
   - (C) separators
   - (D) series connecting straps

   If choice C is selected set score to 1.

69. A check run on a hydraulic anchor windlass during long periods of inactivity should be carried out to __________.

   - (A) remove condensation from the fluid reservoir
   - (B) prevent chemical breakdown of hydraulic fluid
   - (C) prevent the anchor from seizing in the hawsepipe
   - (D) renew the internal coating of lubrication

   If choice D is selected set score to 1.
70. The Muster List ("Station Bill") shows each crew lifeboat station, their duties during abandonment, basic instructions, and __________.

- (A) the time each weekly drill will be held
- (B) all emergency signals
- (C) work schedule
- (D) instructions for lowering the survival capsule

*If choice B is selected set score to 1.*
Adapted for testing purposes only from HUBERT, Operating, Testing and Preventive Maintenance of Electrical Power Apparatus.
Copyright © 2003 Pearson Education
Further reproduction prohibited without permission
Adapted for testing purposes only from MAZUR, Digital Multimeter Principles, Third Edition
Copyright © 2006 by American Technical Publishers, Inc.
Further reproduction prohibited without permission

10/5/2018
Adapted for testing purposes only from SMITH, Modern Marine Electricity and Electronics
Copyright © 1966 by Cornell Maritime Press, Inc.
Further reproduction prohibited without permission
Adapted for testing purposes only from HUBERT, Operating, Testing and Preventive Maintenance of Electrical Power Apparatus

Copyright © 2003 Pearson Education

Further reproduction prohibited without permission

10/9/2018
GS-0017

Bushing
AISI 1095 SAE Carbon Steel
Hardened and Tempered
Designated Surfaces Ground
To Specified Tolerances