

U.S.C.G. Merchant Marine Exam
Master/Chief Mate of Unlimited Tonnage
Q102 Deck General – Part II
(Sample Examination)

Choose the best answer to the following Multiple-Choice Questions.

1. While on cargo watch, you notice one of the containers of Class 1 explosive materials has been damaged and some of the contents has leaked onto the deck. In accordance with U.S. regulations what actions must be taken?
- A. Repairs can be made onboard by the crew as long as the vessel remains in port
 - B. The incident must be reported to the stevedore and repairs can be done on the vessel
 - C. Contents may be set aside until it is convenient to offload them
 - D. The Master must report the incident to the COTP as soon as practical

Correct answer: D

2. What best describes for how long a gas-free test is good?
- A. For the instant that it is made
 - B. Until valves in line with the tank or compartment are reopened
 - C. Until changes in temperature or pressure affect the vapor content in the space
 - D. For as long as is indicated on the gas-free certificate

Correct answer: A

3. What is an enclosure which will withstand ignition of a flammable gas, and which will prevent the transmission of any flame able to ignite a flammable gas, which may be present in the surrounding atmosphere called?
- A. a flame proof screen
 - B. gas-safe enclosure
 - C. explosion proof
 - D. primary gas barrier

Correct answer: C

4. You are preparing to load a heavy cargo with abnormal physical dimensions onboard your vessel. Which of the following is of primary importance when planning the load?
- A. Comparing the broken stowage factor of the unit to other cargo in the hold
 - B. Comparing how much cargo can be loaded on top of the abnormal units
 - C. Ensuring the proper customs forms and labels are on the units
 - D. Ensuring the maintenance of adequate stability throughout the voyage

Correct answer: D

5. What is NOT required as special safety equipment on a tankship carrying hazardous cargoes in bulk?
- A. Shower and eyewash fountain
 - B. Two portable vapor detectors suitable for the cargoes carried
 - C. Equipment to lift an injured person from a pumproom
 - D. A safety locker adjacent to the emergency shutdown station

Correct answer: B

Choose the best answer to the following Multiple-Choice Questions.

6. A half-height container is used _____.
- A. to double the stowage capacity of the vessel
 - B. when stowage space is ample
 - C. to carry cargoes such as steel products or drums
 - D. to carry cargoes of low density

Correct answer: C

7. Maritime Administration personnel may be allowed in the pilothouse and on the navigation bridge. Who is responsible for these personnel while in these areas of the vessel?
- A. The Chief Officer
 - B. The most senior person present from the Maritime Administration
 - C. The Navigational Officer
 - D. The Master of the vessel

Correct answer: D

8. Your vessel is moored portside to and you are taking over the Deck Watch. Which item has the most impact on the safety of the vessel and crew?
- A. The API and Flash Point of the bunker fuel
 - B. The operational state of the main engine
 - C. The names of the visitors that have departed the vessel
 - D. The uncorrected local variation on the chart

Correct answer: B

9. Which lashing gear used aboard Ro-Ro vessels should be painted or soaked in oil when not in use?
- A. Wire rope.
 - B. Chain
 - C. Webbing
 - D. All of the above

Correct answer: B

10. Which is characteristic of a "special cargo"?
- A. It must be stowed on deck.
 - B. Periodic inspection is required while in transit to prevent spoilage.
 - C. It is of high value or easily pilferable.
 - D. The cargo gives off toxic gases when heated.

Correct answer: C

Choose the best answer to the following Multiple-Choice Questions.

11. A marine chemist issues gas free certificates and is certified by which organization?

- A. American Chemical Society
- B. Mine Safety Appliance Association
- C. National Fire Protection Association
- D. Marine Chemists Association

Correct answer: C

12. Given a dry bulb temperature of 78°F and wet bulb temperature of 66.5°F, what is the dew point?

- A. 47.0°F
- B. 51.5°F
- C. 59.0°F
- D. 70.0°F

Correct answer: C

13. As a general guide, under which condition should hygroscopic cargoes be ventilated?

- A. When the dew point of the outside air is greater than the dew point of the air in the hold
- B. When going from a warm to a cold climate
- C. When the dew point of the air in the hold is very low
- D. When the outside dew point is 60°F (16°C) and the cargo temperature is 54°F (12°C)

Correct answer: B

14. The wire rope used for cargo handling on board your vessel has a safe working load of eight tons. It shall be able to withstand a breaking test load of _____.

- A. 32 tons
- B. 40 tons
- C. 48 tons
- D. 64 tons

Correct answer: B

15. Cargo vessels being navigated, and fitted with emergency lighting and power systems, shall have their emergency systems tested at which interval?

- A. Once in every 12 months
- B. At least once in each week
- C. Once in every 6 months
- D. At least once in each month

Correct answer: B

Choose the best answer to the following Multiple-Choice Questions.

- 16.** You must load as much of a large shipment of case goods as possible into a hold which has 24,400 cubic feet of space. Each case measures 2 feet by 2 feet by 4 feet and weighs 448 pounds. If you allow for broken stowage of 15%, how many long tons can be loaded?
- A. 54
 - B. 207
 - C. 259
 - D. 351

Correct answer: C

- 17.** A disadvantage of using chain lashing on heavy vehicles aboard Ro-Ro vessels is that _____.
- A. it is affected by temperature
 - B. it has high initial cost
 - C. it is easily damaged
 - D. the links lose strength if placed over corners

Correct answer: D

- 18.** In special cases, the Commandant of the Coast Guard may permit cargo piping to pass through machinery spaces, what are the type(s) of cargo permitted to be carried through such piping?
- A. grades A or B
 - B. LFG
 - C. grades D or E
 - D. grade E

Correct answer: D

- 19.** Ship's officers should check every cargo compartment after it is filled with bulk grain to ensure which of the following?
- A. All lighting circuits are energized
 - B. All spaces are filled
 - C. The correct grade of cargo has been loaded
 - D. The heavier grade is in the lower hold

Correct answer: B

- 20.** The tankship Northland is loaded as shown in table BL-0004 below. Use the salmon-colored pages in the Stability Data Reference Book to determine the hogging numeral.
- A. 49.73 numeral
 - B. 52.76 numeral
 - C. 55.29 numeral
 - D. 57.93 numeral

Correct answer: A

Choose the best answer to the following Multiple-Choice Questions.

21. According to the Chemical Data Guide, what are the flammable limits of ethylene oxide?

- A. 2 - 100%
- B. 2.7 - 34%
- C. 1.9 - 88.0%
- D. 1.85 - 48.0%

Correct answer: A

22. In accordance with U.S. regulations which statement is true concerning packages containing Class 1 explosive material?

- A. Defective packages of Class 1 materials may not be accepted for shipment
- B. Defective packages of Class 1 materials require a Statement of Fact to be submitted prior to loading
- C. Defective packages of Class 1 materials may be accepted for shipment
- D. Defective package of Class 1 materials may be repaired onboard the vessel

Correct answer: A

23. Who issues the certificate of loading required by each vessel carrying grain in bulk?

- A. shipper of the cargo
- B. American Bureau of Shipping
- C. owner or charterer of the vessel
- D. National Cargo Bureau

Correct answer: D

24. To determine the weight capacity of a deck in a cargo hold, which reference would you refer to?

- A. The deck capacity plan
- B. The cubic capacity tables
- C. The general arrangement plan
- D. The deadweight scale

Correct answer: A

25. Cargo hose carried on tank vessels must be designed to withstand the pressure of the shutoff head of the cargo pump or pump relief valve setting, but in no case should it be less than _____.

- A. 100 psi
- B. 150 psi
- C. 200 psi
- D. 250 psi

Correct answer: B

Choose the best answer to the following Multiple-Choice Questions.

26. Before loading bulk grain, why should the bilge wells be covered with burlap?

- A. To prevent oil, water, or other liquid from reaching the cargo
- B. To add strength to the bilge well strainer
- C. To permit rapid flow of water to the bilge wells
- D. To prevent cargo sifting into the bilge wells

Correct answer: D

27. Which action(s) is/are included in crane operations?

- A. Removing booms from stowage
- B. Pre-operation checks and start-up
- C. Luff, slew, and hoist operations
- D. All of the above

Correct answer: D

28. Under the Carriage of Goods by Sea Act of 1936, a vessel will be liable for damage to cargo when the damage arises out of which situation?

- A. Overloading the vessel
- B. Inherent vice
- C. A fire caused by lightning
- D. The poor stowage of cargo in a container

Correct answer: A

29. When using the Code of Federal Regulations (CFR's) for Tank Vessels, you see T/O and B/C. What do the T and B tell you?

- A. Type of vessel to which the regulation applies
- B. Special construction limitations
- C. The waters in which vessels may operate
- D. Grades of cargo which may be carried

Correct answer: A

30. Ten triangular piles of piping on the pier are to be loaded - each pile has a 20 foot base, is 15 feet high and 30 feet long. If the breadth of the hold is 60 feet and the piping is to be stowed fore and aft in a 30 foot space, how high will it stow?

- A. 16.6 feet
- B. 25.0 feet
- C. 50.0 feet
- D. 75.0 feet

Correct answer: B

Choose the best answer to the following Multiple-Choice Questions.

31. The load chart of a crane enables the operator to combine the load radius with boom length to determine the _____.

- A. maximum counter weight required
- B. minimum horsepower required
- C. hoist rope strength
- D. allowable load

Correct answer: D

32. When bunkering is complete, which is the correct procedure concerning the bunker hoses?

- A. The hose must be drained, blanked off, and stored securely
- B. The hose must be stowed vertically and allowed to drain
- C. The hose should be washed out with hot soapy water
- D. The hose must be cleaned internally with a degreaser

Correct answer: A

33. A case received for shipment has the markings shown in illustration D043DG below. Each carton measures 13" X 15" X 23". What is the total cubic capacity the entire consignment will occupy if you assume 10% broken stowage?

- A. 779 cubic feet (22 cubic meters)
- B. 857 cubic feet (24 cubic meters)
- C. 1047 cubic feet (30 cubic meters)
- D. 112,125 cubic feet (3173 cubic meters)

Correct answer: B

34. How should a look-out, in the merchant service, report sightings?

- A. Gyro bearings
- B. True bearings
- C. Relative bearings
- D. Magnetic bearings

Correct answer: C

35. Regulations require that prior to departure on a three-day voyage, the steering gear, whistle, and communications system between the bridge and engine room must be tested prior to departure no earlier than _____.

- A. 1 hour
- B. 4 hours
- C. 8 hours
- D. 12 hours

Correct answer: D

Choose the best answer to the following Multiple-Choice Questions.

36. Because of the arrangement of the cell guides, which is the MOST important factor while loading containers?

- A. The size of the shoreside crane
- B. The list of the vessel
- C. The contents of the container
- D. The weight of the container

Correct answer: B

37. What color must the last 1.0 meter (3.3 feet) of piping before the vessel vapor connection be painted?

- A. hi-visibility yellow
- B. red/yellow/red
- C. international orange
- D. yellow/red/yellow

Correct answer: B

38. If you carry packaged hazardous cargoes on a break bulk vessel bound foreign, you must _____.

- A. remove the hazardous cargo labels from a portable tank after the tank is emptied
- B. have the shipping papers indicate the proper shipping name and the technical name of n.o.s. cargoes
- C. log the receipt of hazardous cargoes in the Official Logbook
- D. stow the hazardous cargoes on deck available for jettisoning if necessary

Correct answer: B

39. How should you signal the crane operator to use the main hoist?

- A. First tap your elbow with one hand, and then proceed to use regular signals.
- B. Extend arm with the thumb pointing up and flex the fingers in and out for as long as the load movement is desired.
- C. First tap the top of your head with your fist, and then proceed to use regular signals.
- D. Use one hand to give any motion signal, and place the other hand motionless in front of the hand giving the motion signal.

Correct answer: C

40. What is meant by the term "topping the boom"?

- A. Spotting the boom over the deck
- B. Raising the boom
- C. Lowering the boom
- D. Swinging the boom athwartships

Correct answer: B

Choose the best answer to the following Multiple-Choice Questions.

- 41.** You are in a tropical port. The refrigeration machinery on a container loaded with air-cooled fruit fails. It cannot be repaired for 18 to 24 hours. Which step should you take to reduce the temperature rise and spoilage of the fruit?
- A. Discharge a cylinder of nitrogen into the container
 - B. Shade the container and periodically hose it down
 - C. Spread ice over the top layer and in any voids within the container
 - D. Seal any ventilation openings and add dry ice

Correct answer: B

- 42.** Your vessel is loaded with nonhygroscopic cargoes and is going from a cold to a warm climate. Which action should you take to avoid sweat damage while on the voyage?
- A. Start the intake blowers
 - B. Start the exhaust blowers
 - C. Do not ventilate the cargo holds
 - D. Ventilate the cargo holds

Correct answer: C

- 43.** The most likely time for oil pollution while bunkering is when _____.
- A. hoses are disconnected and being capped
 - B. first starting to receive fuel
 - C. final topping off is occurring
 - D. hoses are being blown down

Correct answer: C

- 44.** A high cube container is designed specifically to accomplish which task?
- A. Carry cargoes of very low stowage factors
 - B. Stow cargoes with concentrated weights such as machinery
 - C. Protect fragile cargoes
 - D. Carry low density cargoes

Correct answer: D

- 45.** Before welding is permitted on a fuel tank, it must be certified or declared as which of the following?
- A. safe for hot-work
 - B. safe for personnel
 - C. not safe for personnel
 - D. not safe for hot-work

Correct answer: A

Choose the best answer to the following Multiple-Choice Questions.

- 46.** You are loading 465,000 barrels of cargo oil. At 0900 you find that you have loaded 207,000 barrels. At 1030 you find that you have loaded 223,000 barrels. If you continue loading at the same rate, you will finish at approximately _____.
- A. 2100 that night
 - B. 0730 the next day
 - C. 0910 the next day
 - D. 1215 the next day

Correct answer: C

- 47.** What is acceptable flame screening?
- A. A fitted single brass screen of 10 x 10 mesh
 - B. A fitted single stainless-steel screen of 15 x 15 mesh
 - C. Two fitted brass screens of 10 x 15 mesh spaced 1/2 inch apart
 - D. A fitted stainless-steel screen of 30 x 30 mesh

Correct answer: D

- 48.** When is a lookout permitted to leave his station?
- A. Only when properly relieved
 - B. At the end of the watch
 - C. 15 minutes before the end of the watch
 - D. At any time

Correct answer: A

- 49.** Which of the following statements is/are TRUE in regard to Ro-Ro vessels' spaces that are "specially suitable for vehicles"?
- A. The spaces shall have designated smoking areas.
 - B. The spaces shall be fitted with an approved fire or smoke detecting system.
 - C. The spaces are prohibited from being fitted with fixed CO2 fire extinguishing systems.
 - D. All of the above

Correct answer: B

- 50.** An annual inspection of a tank vessel shall be made between which of the following months while the Certificate of Inspection is valid?
- A. 8 - 12 months
 - B. 8 - 13 months
 - C. 9 - 15 months
 - D. 12 - 16 months

Correct answer: C



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