

U.S.C.G. Merchant Marine Exam
Operator Uninspected Passenger Vessels
Q357 Nav General – Great Lakes and Inland
(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. What do chart legends printed in capital letters indicate about the associated landmark?

- (A) The landmark is inconspicuous
- (B) The landmark has a radio transmitter
- (C) The landmark is conspicuous
- (D) It is a government facility or station

If choice C is selected set score to 1.

2. When using GPS, how many theoretical position lines are required for a three-dimensional fix?

- (A) 1
- (B) 2
- (C) 3
- (D) 4

If choice D is selected set score to 1.

3. The luminous range of a light takes into account which factor?

- (A) The observer's height of eye
- (B) The glare from background lighting
- (C) The existing visibility conditions
- (D) The elevation of the light

If choice C is selected set score to 1.

4. You are steering 019°T, and a light is picked up dead ahead at a distance of 11.6 miles at 0216. You change course to pass the light 3 miles off abeam to port. If you are making 14 knots, what is your ETA at the position 3 miles off the light?

- (A) 0307
- (B) 0301
- (C) 0304
- (D) 0258

If choice C is selected set score to 1.

5. How often is The Local Notice to Mariners updated?

- (A) Daily
- (B) Monthly
- (C) Weekly
- (D) Semiannually

If choice C is selected set score to 1.

6. White and orange buoys, if lighted, show which color light?

- (A) Alternating yellow and white
- (B) Red
- (C) White
- (D) Orange

If choice C is selected set score to 1.

7. Which topmark shown in illustration D023NG below identifies an isolated danger?

- (A) A
- (B) B
- (C) C
- (D) D

If choice B is selected set score to 1.

8. You are underway and intend to make good a course of 088°T. You experience a current with a set and drift of 300°T at 2.4 knots, and a southerly wind produces a leeway of 3°. You adjust your course to compensate for the current and leeway, while maintaining an engine speed of 16 knots. What will be your speed made good over your intended course of 088°T?

- (A) 13.4 knots
- (B) 13.9 knots
- (C) 14.4 knots
- (D) 14.9 knots

If choice B is selected set score to 1.

9. Which publication contains information on navigation regulations, landmarks, channels, anchorages, tides, currents, and clearances of bridges for Chesapeake Bay?

- (A) Pilot Charts
- (B) Sailing Directions
- (C) Light List
- (D) Coast Pilot

If choice D is selected set score to 1.

10. When operated over a muddy bottom, a fathometer may indicate which of the following?

- (A) No depth reading
- (B) A shallow depth reading
- (C) A zero depth reading
- (D) Two depth readings

If choice D is selected set score to 1.

11. Which light characteristic may be used on a special purpose mark?

- (A) Occulting
- (B) Quick flashing
- (C) Equal interval
- (D) Fixed

If choice D is selected set score to 1.

12. Determine the time after 0300 CST (ZD +6) when the velocity of the tidal current will be 0.5 knot on 16 April 1983, at Port Arthur Canal Entrance, TX.

- (A) 0436
- (B) 0507
- (C) 0538
- (D) 0554

If choice B is selected set score to 1.

13. While on a course of 138°T, a light bears 14° on the starboard bow at a distance of 8.6 miles. What course should you steer to pass 3 miles abeam of the light leaving it to starboard?

- (A) 138°T
- (B) 141°T
- (C) 135°T
- (D) 132°T

If choice D is selected set score to 1.

14. Which of the following traits possessed by an articulated light makes it superior to other types of buoys?

- (A) The fog horn signal travels farther to sea
- (B) It has a reduced watch circle
- (C) It is equipped with strobe lights
- (D) The radar reflectors return better signals

If choice B is selected set score to 1.

15. You are approaching Chatham Strait from the south in foggy weather. You have Coronation Island and Hazy Islands on the radar. Suddenly the radar malfunctions. You then resort to using whistle echoes to determine your distance off Coronation Island. Your stopwatch reads 16.3 seconds for the echo to be heard. How far are you off Coronation Island?

- (A) 1.0 mile
- (B) 1.5 miles
- (C) 2.0 miles
- (D) 2.5 miles

If choice B is selected set score to 1.

16. What is a CORRECT reply to a pilot's request, "How's your head"?

- (A) "Checked"
- (B) "Steady"
- (C) "Eased to 10° rudder"
- (D) "Passing 50°"

If choice D is selected set score to 1.

17. You are steaming southward along the west coast of the United States when you sight a buoy showing a flashing green light. How should you pass this buoy?

- (A) Leave it to your port.
- (B) Pass it close aboard on either side.
- (C) Pass it on either side but well clear of it.
- (D) Leave it to your starboard.

If choice D is selected set score to 1.

18. If an observer in the Northern Hemisphere faces the surface wind, where is the center of low pressure located?

- (A) To the left, and slightly behind
- (B) To the left, and slightly in front
- (C) To the right, and slightly behind
- (D) To the right, and slightly in front

If choice C is selected set score to 1.

19. To make sure of getting the full advantage of a favorable current, you should reach an entrance or strait at which time in relation to the predicted time of the favorable current?

- (A) One hour after
- (B) 30 minutes before
- (C) 30 minutes before flood, one hour after an ebb
- (D) At the predicted time

If choice B is selected set score to 1.

20. Which is TRUE of the direction of flow (channel) on the Corps of Engineer's Navigation Maps?

- (A) The direction of flow (channel) is not indicated
- (B) The direction of flow (channel) is indicated by depths (in feet)
- (C) The direction of flow (channel) is always midway between the banks
- (D) The direction of flow (channel) is indicated by a broken line

If choice D is selected set score to 1.

21. Fog forms when which condition exists?

- (A) When the air is 90% water saturated
- (B) When the air temperature is greater than the dew point temperature
- (C) When the air temperature is equal to, or below the dew point temperature
- (D) When the air is 50% water saturated

If choice C is selected set score to 1.

22. Under the U.S. Aids to Navigation System used on the Western Rivers, which is TRUE of the aids to navigation lights on the right descending bank?

- (A) They can only be white lights
- (B) They are white or red lights
- (C) They are white or green lights
- (D) They can only be green lights

If choice C is selected set score to 1.

23. The National Oceanic and Atmospheric Administration publishes which item?

- (A) pilot charts
- (B) Sailing Directions
- (C) Light Lists
- (D) Coast Pilots

If choice D is selected set score to 1.

24. Your vessel is proceeding down a channel, and you see a pair of range lights that are in line dead ahead. The chart indicates that the direction of this pair of lights is $229^{\circ}T$, and variation is $6^{\circ}W$. If the heading of your vessel at the time of the sighting is 232° per standard magnetic compass, what is the deviation?

- (A) $3^{\circ}E$
- (B) $9^{\circ}E$
- (C) $3^{\circ}W$
- (D) $9^{\circ}W$

If choice A is selected set score to 1.

25. Buoys which only mark the left or right side of the channel will never exhibit a light with which characteristic?

- (A) Composite group flashing
- (B) Flashing
- (C) Equal interval (isophase)
- (D) Quick flashing

If choice A is selected set score to 1.

26. You are steaming southward along the west coast of the United States when you encounter a buoy showing a flashing red light. Which is TRUE concerning the buoy?

- (A) The buoy can remain on either side close aboard
- (B) The buoy should be left on the vessel's starboard side
- (C) The buoy can be on either side well clear
- (D) The buoy should be left on the vessel's port side

If choice D is selected set score to 1.

27. The climate of the eastern coast of the Gulf of Mexico _____.

- (A) has an east coast marine type of climate
- (B) varies from warm to subtropical
- (C) is humid and subtropical throughout the year
- (D) has a Mediterranean type of climate

If choice B is selected set score to 1.

28. Which is TRUE concerning Wind velocity?

- (A) It varies directly with the temperature of the air mass
- (B) It varies directly with the pressure gradient
- (C) It varies inversely with the barometric pressure
- (D) It varies inversely with the absolute humidity

If choice B is selected set score to 1.

29. What are the colors of a mid-channel daymark?

- (A) Black and red
- (B) Green and white
- (C) Green and red
- (D) Red and white

If choice D is selected set score to 1.

30. When drawing a weather map and an isobar crosses a front, the isobar is drawn _____.

- (A) perpendicular to the front
- (B) kinked and pointing away from the low
- (C) kinked and pointing towards the high for a warm front only
- (D) kinked and pointing towards the low

If choice B is selected set score to 1.

31. What does a steep barometric gradient indicate?

- (A) Precipitation
- (B) Calms
- (C) Strong winds
- (D) Light winds

If choice C is selected set score to 1.

32. Which feature, when set to zero, might allow a GPS unit to have an accuracy equivalent to Precise Positioning Service receiver capability?

- (A) Selective Availability
- (B) Transit
- (C) Auto-correlation
- (D) Anti-spoofing

If choice A is selected set score to 1.

33. Which agency maintains federal aids to navigation?

- (A) Maritime Administration
- (B) Corps of Engineers
- (C) Coast Guard
- (D) National Ocean Service

If choice C is selected set score to 1.

34. The term "flood current" refers to that time when the water _____.

- (A) is moving towards the ocean
- (B) level is rising because of heavy rains
- (C) is flowing towards the land
- (D) level is not changing

If choice C is selected set score to 1.

35. What is characteristic of an isophase light?

- (A) 2 sec. flash, 5 sec. eclipse
- (B) 4 sec. flash, 2 sec. eclipse, 3 sec. flash, 2 sec. eclipse
- (C) 1 sec. flash, 1 sec. eclipse
- (D) 6 sec. flash, 3 sec. eclipse

If choice C is selected set score to 1.

36. What will be the velocity of the tidal current in Bolivar Roads, Texas, at a point 0.5 mile north of Ft. Point, on 23 November 1983 at 0330 CST (ZD +6)?

- (A) Slack water
- (B) 0.8 kt
- (C) 1.2 kts
- (D) 3.4 kts

If choice A is selected set score to 1.

37. Which is the reference datum used in determining the heights of land features on most charts?

- (A) Mean high water
- (B) Mean sea level
- (C) Half-tide level
- (D) Mean low water

If choice A is selected set score to 1.

38. You are steering 318°psc. A northeasterly wind causes 3° of leeway. The variation is 14°E and the deviation table is extracted below. What will be the true course made good?

DEVIATION TABLE

Magnetic

| <u>Heading</u> | <u>Deviation</u> |
|----------------|------------------|
| 300° | 2°E |
| 315° | 0 |
| 330° | 2°W |

- (A) 303°T
- (B) 329°T
- (C) 301°T
- (D) 327°T

If choice B is selected set score to 1.

39. You desire to make good a true course of 129°. The variation is 7°E, magnetic compass deviation is 4°E, and gyrocompass error is 2°W. An easterly wind produces a 4° leeway. What is the course to steer per standard magnetic compass to make the true course good?

- (A) 114°psc
- (B) 122°psc
- (C) 116°psc
- (D) 126°psc

If choice A is selected set score to 1.

40. In the U.S. Aids to Navigation System, lateral aids as seen entering from seaward will display lights with which characteristic?

- (A) Occulting
- (B) Quick Flashing
- (C) Flashing
- (D) All of the above

If choice D is selected set score to 1.

41. Which is TRUE concerning air masses near the earth's surface?

- (A) They are not deflected by the earth's rotation
- (B) They move from areas of high pressure to areas of low pressure
- (C) Air masses are not affected the earth' gravity
- (D) In North America the air masses move from east to west

If choice B is selected set score to 1.

42. The largest waves (heaviest chop) will usually develop where the wind blows _____.

- (A) in the same direction as the flow of the current
- (B) at right angles to the flow of the current
- (C) over slack water
- (D) against the flow of the current

If choice D is selected set score to 1.

43. Which is TRUE of a vertically-striped buoy?

- (A) It may be lighted with a red light
- (B) It may be striped black and yellow
- (C) It may be striped black and green
- (D) It may be lighted with a white light

If choice D is selected set score to 1.

44. Which type of daymark is used to mark the starboard side of the channel when entering from sea?

- (A) Red and white octagon
- (B) Green square
- (C) Black and white diamond
- (D) Red triangle

If choice D is selected set score to 1.

45. Which cardinal quadrant is represented by the topmark in illustration D024NG below?

- (A) Southern
- (B) Western
- (C) Northern
- (D) Eastern

If choice B is selected set score to 1.

46. Your draft is 24 feet. You wish to pass over an obstruction near Lovell Island, MA, on 6 May 1983. The charted depth is 22 feet. Allowing a safety margin of 3.0 feet, what is the earliest time after 0200 DST (ZD +4) that this passage can be made?

- (A) 0215
- (B) 0245
- (C) 0310
- (D) 0347

If choice D is selected set score to 1.

47. Safe water buoys may show ONLY which type of light?

- (A) flashing green lights
- (B) flashing red lights
- (C) yellow lights
- (D) white lights

If choice D is selected set score to 1.

48. You are entering an east coast port and see a buoy with a yellow triangle painted on it. What does the symbol indicate?

- (A) The buoy is a special mark
- (B) You are in the vicinity of the ICW
- (C) The buoy designates a sharp turn in the channel
- (D) The buoy is off station

If choice B is selected set score to 1.

49. You are steering a course of $316^{\circ}T$, and a light bears 34° on the port bow at 2053.

At 2126 the same light bears 68° on the port bow, and you have run 5 miles since the first bearing.

What is the ETA when the lighthouse is abeam?

- (A) 2143
- (B) 2159
- (C) 2139
- (D) 2149

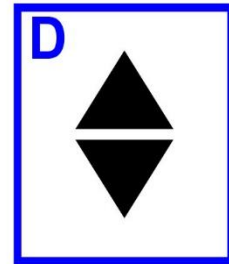
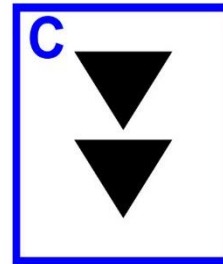
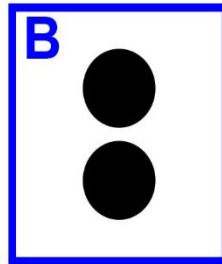
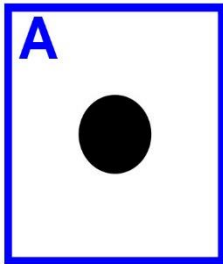
If choice C is selected set score to 1.

50. What is published by the U.S. Coast Guard?

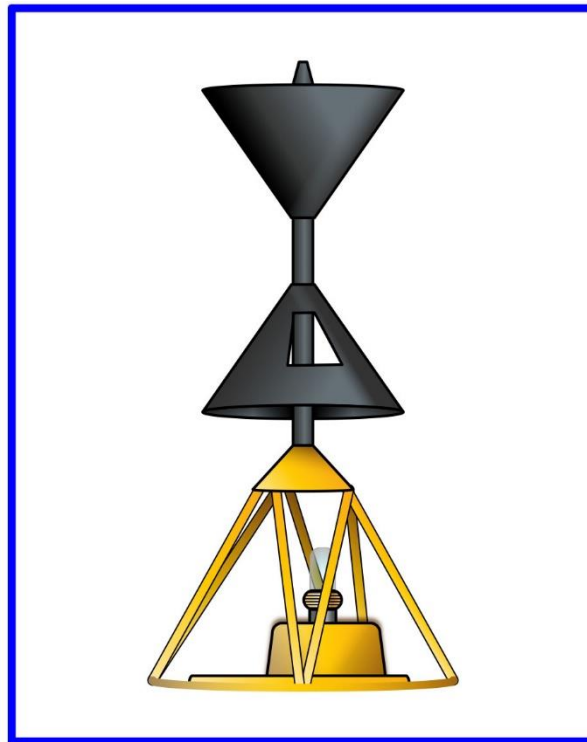
- (A) Tide Tables
- (B) Nautical Charts
- (C) Light List
- (D) U.S. Coast Pilot

If choice C is selected set score to 1.

D023NG



D024NG



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