

U.S.C.G. Merchant Marine Exam
Mate Uninspected Fishing Vessels
Q190 Navigation General – Near Coastal
(Sample Examination)

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

1. By what means are indications of the master gyrocompass sent to remote repeaters?
- A. by azimuth motor
 - B. by transmitter
 - C. by follow-up system
 - D. by phantom element

Correct answer: B

2. Weather information provided by the National Weather Service (NWS) advisories should be used along with which other source of information?
- A. The Tide Tables and Tidal Current Tables
 - B. Any U.S. Coast Pilot
 - C. The local Notice to Mariners
 - D. Weather maps and local knowledge

Correct answer: D

3. How may a spherical buoy be identified?
- A. It may be lettered
 - B. It may be numbered
 - C. It may be green
 - D. It may be red

Correct answer: A

4. Which is TRUE of Raster-scan chart data?
- A. It is composed of files that are smaller than vector files
 - B. It is the only format recognized by IMO/IHO
 - C. It is organized into many separate files
 - D. It is a digitized "picture" of a chart in one format and one layer

Correct answer: D

5. A vessel's position should be plotted using bearings of _____.
- A. buoys close at hand
 - B. fixed known objects on shore
 - C. fixed objects
 - D. All of the above

Correct answer: B

6. You are heading in a northerly direction when you come across an easterly current. Your vessel will respond in which manner?
- A. The vessel will be pushed to starboard
 - B. The vessel will be pushed to port
 - C. The vessel will remain on course
 - D. The vessel will decrease in engine speed

Correct answer: A

7. How is a safe water mark, that can be passed close aboard on either side, painted and lighted?
- A. Red and white stripes with a Morse (A) light
 - B. Black and red stripes with a Morse (A) light
 - C. Black and red stripes with an interrupted quick flashing light
 - D. Black and white stripes with an interrupted quick flashing light

Correct answer: A

8. Relative humidity is the percentage of water vapor that is in the air as compared to the maximum amount it can hold at _____.
- A. a specific temperature
 - B. a specific barometric pressure
 - C. a specific wing speed
 - D. any time

Correct answer: A

9. You take a bearing of 176° of a lighthouse. Which bearing of another object would give the best fix?
- A. 079°
 - B. 151°
 - C. 176°
 - D. 292°

Correct answer: A

10. The Coast Guard Captain of the Port has excluded all traffic from a section of a port, while a regatta is taking place. Which describes the buoys marking this exclusion area?
- A. An orange and white can
 - B. Marked with a spherical topmark
 - C. A yellow can
 - D. A nun- or can-shaped to conform to the overall direction of navigation

Correct answer: A

11. When entering from seaward, what does a buoy displaying a single-flashing red light indicate?
- A. A sharp turn in the channel to the right
 - B. A wreck to be left on the vessel's port side
 - C. A junction with the preferred channel to the left
 - D. The starboard side of the channel

Correct answer: D

12. Which term is used to describe the time interval between successive wave crests?
- A. Epoch
 - B. Trough
 - C. Frequency
 - D. Period

Correct answer: D

13. Weather warnings such as gale, storm and hurricane warnings are based on which criteria?

- A. The amount of rain forecasted
- B. The amount of cloud cover forecasted
- C. The wind speed forecasted
- D. The wave heights forecasted

Correct answer: C

14. What can cause a tsunami?

- A. A tidal wave
- B. A tornado
- C. A storm surge caused by a hurricane or tropical storm
- D. An earthquake on the ocean's floor

Correct answer: D

15. Which term defines the difference between the heights of low and high tides?

- A. Tidal distance
- B. Tidal range
- C. Tidal period
- D. The depth of tide

Correct answer: B

16. You are underway on course 050°T and your maximum speed is 13 knots. The eye of a hurricane bears 100°T, 120 miles from your position. The hurricane is moving towards 275°T at 25 knots. What course should you steer at 13 knots to have the maximum CPA?

- A. 339°
- B. 333°
- C. 326°
- D. 320°

Correct answer: B

17. A latitude line will be obtained by observing a body _____.

- A. on the celestial horizon
- B. at lower transit
- C. on the Greenwich meridian
- D. on the prime vertical

Correct answer: B

18. How are buoys which mark isolated dangers painted?

- A. Alternating green and white bands
- B. Alternating red and black bands
- C. Alternating red and white stripes
- D. Alternating green and black bands

Correct answer: B

19. Quadrantal error in a gyrocompass has its GREATEST effect on which of the following?

- A. When the vessel is on north or south headings
- B. When the vessel is in high latitudes
- C. When the vessel is on intercardinal headings
- D. When the vessel is near the equator

Correct answer: C

20. Fog is formed when which condition exists?

- A. When air is cooled to its dew point
- B. The clouds are middle altitude
- C. When there is moisture in the air
- D. When the land is cooled to its dew point

Correct answer: A

21. What color lights do lighted information markers display?

- A. White lights
- B. Green lights
- C. Yellow lights
- D. Red lights

Correct answer: A

22. When trying to sight a lighthouse you notice a glare from a town in the background. How does this affect the range at which the light may be sighted?

- A. Unchanged
- B. Considerably reduced and difficult to distinguish
- C. Increased if the light is red or green due to contrast with the glare
- D. Increased slightly due to extra lighting

Correct answer: B

23. Which causes the Earth's irregular heating?

- A. The seasons
- B. The time of day
- C. The geography
- D. All of the above

Correct answer: D

24. Which is TRUE when a high-pressure system is centered north of your vessel in the Northern Hemisphere?

- A. The winds should be brisk
- B. You should experience hot, moist, clear weather
- C. The winds should be from the southwest at your position
- D. The wind direction is generally easterly

Correct answer: D

25. Which type of projection is used to make a Mercator chart?

- A. Simple conic projection
- B. Polyconic projection
- C. Cylindrical projection
- D. Rectangular projection

Correct answer: C

26. In modern fathometers, what produces the sonic or ultrasonic sound waves?

- A. A generator
- B. A transceiver
- C. An amplifier
- D. A transducer

Correct answer: D

27. Which are associated with Cumulonimbus clouds?

- A. Dense fog and high humidity
- B. Gusty winds, thunder, rain or hail, and lightning
- C. A rapid drop in barometric pressure followed by darkness
- D. Clear skies with the approach of a cold front

Correct answer: B

28. Which type of precipitation occurs only in thunderstorms with strong convection currents that convey raindrops above and below the freezing level?

- A. Sleet
- B. Hail
- C. Rime
- D. Freezing rain

Correct answer: B

29. Under the IALA cardinal system, what does a mark with a quick white light showing 6 flashes followed by one long flash indicate in relation to the location of the safest water?

- A. Safe water is on the south side of the mark
- B. Safe water is on the east side of the mark
- C. Safe water is on the west side of the mark
- D. Safe water is on the north side of the mark

Correct answer: A

30. Which of the buoys listed below could be used to mark an anchorage?

- A. Yellow buoy lettered "N"
- B. White buoy with a green top
- C. White buoy numbered "3"
- D. White buoy with orange bands

Correct answer: A

31. Which is TRUE of an aneroid barometer?

- A. An instrument used to measure the speed of wind
- B. An instrument that tells which direction a storm is coming from
- C. An instrument in which the pressure of the air is measured
- D. An instrument that is used to measure the height of waves

Correct answer: C

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

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

Correct answer: B

33. A ship is on course 195° at a speed of 15 knots. The apparent wind is from 40° on the port bow, speed 30 knots. What are the direction and speed of the true wind?

- A. 068°T , 30 knots
- B. 127°T , 21 knots
- C. 263°T , 42 knots
- D. 292°T , 42 knots

Correct answer: B

34. Under the IALA-B Buoyage System, when entering from seaward, a buoy that should be left to port will be which color?

- A. Red
- B. Green
- C. Black
- D. Yellow

Correct answer: B

35. Which of the following describes the difference between true heading and magnetic heading?

- A. Northerly error
- B. Deviation
- C. Compass error
- D. Variation

Correct answer: D

36. Which buoy may be even numbered?

- A. Unlighted nun buoy
- B. Lighted green buoy
- C. Mid-channel buoy
- D. All of the above

Correct answer: A

37. Radar makes the most accurate determination of the _____.

- A. size of a target
- B. distance to a target
- C. shape of a target
- D. direction of a target

Correct answer: B

38. You are planning to enter an unfamiliar U.S. port. Which publication provides information about channel depths, dangers, obstructions, anchorages, and marine facilities available in that port?

- A. Notice to Mariners
- B. Sailing Directions
- C. American Practical Navigator
- D. Coast Pilot

Correct answer: D

39. When does the effects of priming of the tides occur?

- A. At times of new and full Moon
- B. When the Moon is between new and first quarter and between full and third quarter
- C. When the Earth, Moon, and Sun are lying approximately on the same line
- D. When the Moon is between first quarter and full and between third quarter and new

Correct answer: B

40. The velocity of the apparent wind can be less than the true wind and from the same direction, if certain conditions are present. One condition is that the _____.

- A. true wind is from dead astern
- B. true wind is on the beam
- C. true wind is from dead ahead
- D. ship's speed is more than the true wind velocity

Correct answer: A

41. In North America, which direction do the majority of the weather systems move?

- A. From north to south
- B. From south to north
- C. From west to east
- D. From east to west

Correct answer: C

42. Your vessel is making way through the water at a speed of 12 knots. Your vessel traveled 30 nautical miles in 2 hours 20 minutes. What current are you experiencing?

- A. A head current with a drift of 0.4 knots
- B. A head current with a drift of 0.9 knot
- C. A following current with a drift of 0.9 knots
- D. A following current with a drift of 0.4 knot

Correct answer: D

43. When drawing a weather map and an isobar crosses a front, the isobar is drawn _____.
- A. perpendicular to the front
 - B. kinked and pointing towards the low
 - C. kinked and pointing away from the low
 - D. kinked and pointing towards the high for a warm front only

Correct answer: C

44. You are on course $344^{\circ}T$ and take a relative bearing of a lighthouse of 270° . What is the true bearing to the lighthouse?
- A. 016°
 - B. 074°
 - C. 090°
 - D. 254°

Correct answer: D

45. The luminous range of a light takes into account which factor?
- A. The observer's height of eye
 - B. The existing visibility conditions
 - C. The elevation of the light
 - D. The glare from background lighting

Correct answer: B

46. What type of clouds are associated with a cold front?
- A. Cirrus and cirrostratus
 - B. Altostratus and fracto-cumulus
 - C. Cumulus and cumulonimbus
 - D. Altostratus and cirrus

Correct answer: C

47. The navigation regulations applicable to a U.S. inland waterway can be found in which publication?
- A. Coast Pilots
 - B. Notices to Mariners
 - C. Channel Reports
 - D. Sailing Directions

Correct answer: A

48. An electronic depth finder operates on which principle?
- A. Radar signals travel at a constant speed through water
 - B. Sound waves travel at a constant speed through water
 - C. Radio signals reflect from a solid surface
 - D. Pressure increases with depth

Correct answer: B

49. What causes deviation in a magnetic compass?

- A. A nearby magnetic land mass or mineral deposits
- B. The magnetic influence inherent to that particular vessel
- C. The changes in the earth's magnetic field
- D. The magnetic lines of force not coinciding with the lines of longitude

Correct answer: B

50. Which Naval Control of Shipping publication should be aboard your vessel?

- A. ATP-1, Volume II "Allied Tactical Signals"
- B. ATP-2, Volume II "Allied Control of Shipping Manual - Guide to Masters"
- C. NWP-14, "Amphibious Operations"
- D. PUB 102, "International Code of Signals"

Correct answer: B