

U.S.C.G. Merchant Marine Exam
Mate Uninspected Fishing Vessels
Q191 Navigation General – Oceans
(Sample Examination)

Choose the best answer to the following Multiple Choice Questions.

1. Which is a nonadjustable error of the sextant?

- (A) Error of collimation
- (B) Centering error
- (C) Side error
- (D) Error of perpendicularity

If choice B is selected set score to 1.

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

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

If choice B is selected set score to 1.

3. Which is TRUE concerning the magnetic information on a chart?

- (A) It may be found in a note on the chart
- (B) It can be found in the center(s) of the compass rose(s)
- (C) It may be indicated by isogonic lines
- (D) All of the above

If choice D is selected set score to 1.

4. How are you informed of defects or changes in aids to navigation?

- (A) Weekly Notice to Mariners
- (B) Marine Safety Information Website
- (C) Local Notice to Mariners
- (D) All of the above

If choice D is selected set score to 1.

5. What is the relative bearing of an object on the port beam?

- (A) 045°
- (B) 090°
- (C) 180°
- (D) 270°

If choice D is selected set score to 1.

6. Which aid is NOT marked on a chart with a magenta circle?

- (A) Radar transponder beacon
- (B) Radio beacon
- (C) Radar station
- (D) Aero light

If choice D is selected set score to 1.

7. At 0000 you fix your position and plot a new DR track line. At 0200 you again fix your position and it is 0.5 mile east of your DR. Which statement is TRUE?

- (A) The drift is 0.25 knot.
- (B) The current is westerly at 0.5 knot.
- (C) The current cannot be determined.
- (D) You must increase speed to compensate for the current.

If choice A is selected set score to 1.

8. Which corrector will compensate for the deviation which is maximum on intercardinal compass headings

- (A) Transverse magnets
- (B) Flinders bar
- (C) Fore-and-aft magnets
- (D) Quadrantal spheres

If choice D is selected set score to 1.

9. A sidereal day is approximately how much shorter than a solar day?

- (A) 4 minutes
- (B) 8 minutes
- (C) 12 minutes
- (D) 16 minutes

If choice A is selected set score to 1.

10. Which term is given to a line on a weather chart connecting places which have the same barometric pressure?

- (A) Isotope
- (B) Isallobar
- (C) Isobar
- (D) Isotherm

If choice C is selected set score to 1.

11. Which of the following data layer categories is NOT displayed on ECDIS?

- (A) Notice to Mariners information
- (B) Hydrographic Office data
- (C) Ship hydrodynamic information
- (D) ECDIS warnings and messages

If choice C is selected set score to 1.

12. You are on course 138°T. To check the latitude of your vessel you should observe a celestial body on which bearing?

- (A) 270°
- (B) 318°
- (C) 138°
- (D) 000°

If choice D is selected set score to 1.

13. The set of the North Equatorial Countercurrent is generally in which direction?

- (A) Northwest
- (B) North
- (C) East
- (D) Southwest

If choice C is selected set score to 1.

14. Tropical storms and hurricanes are most likely to form in the Southern hemisphere during which months?

- (A) January through March
- (B) June through August
- (C) April through May
- (D) September through November

If choice A is selected set score to 1.

15. You are plotting a running fix in an area where there is a determinable current. How should this current be treated in determining the position?

- (A) The course and speed made good should be determined and used to advance the LOP.
- (B) The current should be ignored.
- (C) The set should be applied to the second bearing.
- (D) The drift should be added to the ship's speed.

If choice A is selected set score to 1.

16. Under the IALA Buoyage System, which topmark shown in illustration D023NG below will be displayed on a safe watermark?

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

If choice A is selected set score to 1.

17. An orange and white buoy indicating a vessel-exclusion area will be marked with what symbol?

- (A) Diamond with a cross
- (B) Square
- (C) Open-faced diamond
- (D) Circle

If choice A is selected set score to 1.

18. How often are the time signals broadcast by WWV and WWVH transmitted?

- (A) They are transmitted every 15 minutes
- (B) They are transmitted every 30 minutes
- (C) They are transmitted continuously throughout day
- (D) They are transmitted every hour

If choice C is selected set score to 1.

19. Which is TRUE as the temperature of the air reaches the dew point?

- (A) It begins to snow
- (B) Water freezes
- (C) Fog may form
- (D) Rain must develop

If choice C is selected set score to 1.

20. The most dangerous form of icing encountered at sea is formed by which of the following?

- (A) Sea spray
- (B) Freezing rain
- (C) Hail
- (D) Rime

If choice A is selected set score to 1.

21. What is the primary source of the earth's weather?

- (A) The sun
- (B) The solar system
- (C) The oceans
- (D) The moon

If choice A is selected set score to 1.

22. While steaming on course 280°T, you sight a buoy showing a very quick flashing (VQ) white light well to port. Maintaining course, you sight another buoy showing a quick flashing (Q) white light. How should you pass?

- (A) West of the buoy
- (B) East of the buoy
- (C) South of the buoy
- (D) North of the buoy

If choice D is selected set score to 1.

23. Which characteristic and color will a preferred-channel buoy show?

- (A) A group-occluding white light
- (B) A composite group-flashing (2 + 1) white light
- (C) A composite group-flashing (2 + 1) red or green light
- (D) A white light whose characteristic is Morse (A)

If choice C is selected set score to 1.

24. Where will you find information about the duration of slack water for ports on the Atlantic Coast of North America?

- (A) Tidal Current Tables
- (B) Tide Tables
- (C) Sailing Directions
- (D) American Practical Navigator

If choice A is selected set score to 1.

25. When adjusting a magnetic compass for error, which is TRUE concerning the deviation table?

- (A) Construct the deviation table before the quadrantal correctors are placed on the compass
- (B) Construct the deviation table before correcting for any deviation
- (C) Construct the table after adjusting the fore-and-aft permanent magnets
- (D) Construct the deviation table after correcting for variation

If choice C is selected set score to 1.

26. Where would you expect to find channels marked with the IALA-A Buoyage System?

- (A) India
- (B) Japan
- (C) Canada
- (D) Argentina

If choice A is selected set score to 1.

27. The Light List shows that a navigational light has a nominal range of 15 miles and a height above water of 40 feet (12.2 meters). Your height of eye is 25 feet (7.6 meters) and the visibility is 5 miles. At about what range will you FIRST sight the light?

- (A) 6.2 miles
- (B) 9.5 miles
- (C) 12.9 miles
- (D) 14.2 miles

If choice B is selected set score to 1.

28. It is desirable that a vessel encountering hurricane or typhoon conditions sends weather reports to the closest meteorological service at which time interval?

- (A) Every 8 hours
- (B) Every hour
- (C) Every 6 hours
- (D) Every 3 hours

If choice D is selected set score to 1.

29. How are buoys which mark isolated dangers are painted?

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

If choice C is selected set score to 1.

30. You are steaming west in the South Atlantic in an extratropical cyclonic storm, and the wind is dead ahead. According to the law of Buys Ballot, where does the center of low pressure lie?

- (A) Dead astern of you
- (B) To the south of you
- (C) Dead ahead of you
- (D) To the north of you

If choice B is selected set score to 1.

31. What happens to the intensity of a hurricane as it reaches higher latitudes and cooler waters?

- (A) Increases
- (B) Remains the same
- (C) Decreases
- (D) None of the above

If choice C is selected set score to 1.

32. Which is TRUE for the directive force acting on a gyrocompass?

- (A) The force increases as the latitude increases, being maximum at the geographic poles
- (B) The force remains the same at all latitudes
- (C) The force is greatest when a vessel is near the Earth's magnetic equator
- (D) The force increases as the latitude decreases, being maximum at the geographic equator

If choice D is selected set score to 1.

33. What does the expression "the air is saturated" mean?

- (A) The precipitation has commenced
- (B) The cloud cover is 100%
- (C) The relative humidity is 100%
- (D) The vapor pressure is at its maximum for the prevailing temperature

If choice C is selected set score to 1.

34. While underway vessels equipped with an automatic identification system (AIS) are required to transmit specific information at varying intervals. What information contained in a class A unit broadcast is only required to be transmitted every six minutes?

- (A) The rate of turn of the vessel
- (B) The navigational status
- (C) The name of the vessel
- (D) The vessel's heading

If choice C is selected set score to 1.

35. If the current and wind are in the same direction, what does the sea surface represent concern the true wind speed?

- (A) It appears at the correct speed
- (B) It appears less than actually exists
- (C) It appears higher than actually exists
- (D) The appearance of the sea surface does not change

If choice B is selected set score to 1.

36. Which clouds is a thin, whitish, high cloud popularly known as "mares' tails"?

- (A) Cumulus
- (B) Altostratus
- (C) Stratus
- (D) Cirrostratus

If choice D is selected set score to 1.

37. You are enroute to assist vessel A. Vessel A is underway at 5 knots on course 063°T, and bears 136°T at 78 miles from you. What is the course to steer and running time at 13 knots to intercept vessel A?

- (A) 158°, 5h 45m
- (B) 115°, 5h 45m
- (C) 158°, 7h 20m
- (D) 115°, 7h 20m

If choice D is selected set score to 1.

38. Which term is used to describe a generally circular low pressure area?

- (A) A cold front
- (B) An anticyclone
- (C) A cyclone
- (D) An occluded front

If choice C is selected set score to 1.

39. Some locations maintain a zone time of -13. What are the zone time and date if the Greenwich time and date are 0152, 10 January?

- (A) 0052, 9 January
- (B) 0258, 9 January
- (C) 1452, 10 January
- (D) 0052, 11 January

If choice C is selected set score to 1.

40. What type of clouds are associated with a cold front?

- (A) Cirrus and cirrostratus
- (B) Cumulus and cumulonimbus
- (C) Altostratus and cirrus
- (D) Altostratus and fracto-cumulus

If choice B is selected set score to 1.

41. What is a characteristic of a rhumb line?

- (A) It cuts each meridian at the same angle.
- (B) It is the shortest distance between two points on the Earth.
- (C) The course angle constantly changes to form the loxodromic curve.
- (D) It plots as a straight line on a Lambert conformal chart.

If choice A is selected set score to 1.

42. The line of position determined from a sight with an observed altitude (H_o) of $88^\circ 45.0'$ should be _____.

- (A) reduced to the meridian and plotted as a latitude line
- (B) plotted as an arc around the GP of the body
- (C) calculated as a longitude line
- (D) plotted by using an intercept from an assumed position

If choice B is selected set score to 1.

43. On a transpacific voyage, you receive a message from your vessel's operators saying that your vessel has been consigned to voluntary Naval Cooperation and Guidance for Shipping (NCAGS). Where can further information be located?

- (A) The Light List
- (B) the Coast Pilot
- (C) the International Code of Signals (PUB 102)
- (D) Radio Aids to Navigation (PUB 117)

If choice D is selected set score to 1.

44. To avoid error, how should you read the scale of an aneroid barometer?

- (A) With your eye to the left of the pointer
- (B) With your eye slightly above the meniscus
- (C) With your eye directly in front of the pointer
- (D) With your eye to the right of the pointer

If choice C is selected set score to 1.

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

- (A) From south to north
- (B) From east to west
- (C) From north to south
- (D) From west to east

If choice D is selected set score to 1.

46. A List of Lights entry (L Fl) is a single flashing light which shows a long flash of not less than which duration?

- (A) 1.0 second duration
- (B) 1.5 seconds duration
- (C) 2.0 seconds duration
- (D) 3.0 seconds duration

If choice C is selected set score to 1.

47. When the moon is at first quarter or third quarter phase, what type of tides will occur?

- (A) Apogean
- (B) Spring
- (C) Perigean
- (D) Neap

If choice D is selected set score to 1.

48. Which term is given to the arc of an hour circle between the celestial equator and a point on the celestial sphere, measured northward or southward through 90° ?

- (A) Altitude
- (B) Azimuth angle
- (C) Declination
- (D) Latitude

If choice C is selected set score to 1.

49. Which daymark has no lateral significance?

- (A) Red triangle
- (B) Green square
- (C) Square; top half green and bottom half red
- (D) Black and white diamond

If choice D is selected set score to 1.

50. What is the difference in local time between an observer on 114°W and one on 119°W ?

- (A) 1.25 minutes
- (B) 5 minutes
- (C) 20 minutes
- (D) 75 minutes

If choice C is selected set score to 1.

D023NG

