

- (g.) The General Notices published in the Board of Trade Summary of Notices to Mariners.  
 (r.) Elementary questions on the main parts of a ship's construction.

32. **Examination in Seamanship.**—He must understand and give satisfactory answers on the following subjects:—

- (a.) The standing and running rigging of ships.  
 (b.) Bending, unbending, setting, reefing, taking in, and furling sail.  
 (c.) Sending masts and yards up and down, &c.  
 (d.) Management of a ship when under canvas.  
 (e.) Management of ship's boats in heavy weather.  
 (f.) Dunnaging and stowing cargo, &c.  
 (g.) The rule of the road as regards both steamers and sailing-vessels, their regulation lights, and fog and sound signals.  
 (h.) The signals of distress, and the signals to be made by ships wanting a pilot, and the liabilities and penalties incurred by the misuse of these signals.  
 (i.) The marking and the use of the lead and log lines, also care and use of sounding-machines and mechanical logs.  
 (j.) The use and management of the rocket apparatus in the event of a vessel being stranded.  
 (k.) Any questions appertaining to the duties of a second mate that the Examiner may think necessary to ask.  
 (l.) Also questions on the additional subjects which are specified in the rules of examination for second mates' certificates of competency for foreign-going steamships. (See para. 45.)

*Mate, Ordinary.*

33. **Only Mate, Ordinary.**—A candidate must be not less than nineteen years of age, and have served five years at sea.

34. **First Mate, Ordinary.**—A candidate must be not less than nineteen years of age, and have served five years at sea, of which—

- (a.) One year must have been in a capacity not lower than fourth mate of a foreign-going vessel whilst holding a second mate's certificate for foreign-going vessels. If his service was as third or fourth mate proof will be required that he had during the whole year *charge of a watch*. (See para. 115.)  
 (b.) *Or*, one year and a half must have been in a capacity not lower than only mate in a home-trade or coasting vessel whilst holding a second mate's certificate for foreign-going vessels or a mate's certificate for home-trade ships.  
 (c.) *Or*, one year must have been as pilot, with a first-class pilot's certificate. (See para. 112.)

35. **Mate, Ordinary : Examination in Navigation.**—In addition to the work for the second mate's certificate, a candidate for the only or first mate's certificate will be required—

- (a.) To answer questions on right-angled spherical trigonometry.  
 (b.) To compute the time at which a given star will be on the observer's meridian (occasionally by inspection).  
 (c.) To determine what bright stars will be within a certain hour-angle from the observer's meridian, above the pole and above the horizon, at any given time; also the hour-angle, east or west, of each of the stars, and whether to the north or south of the observer's zenith when passing the meridian.  
 (d.) To compute the approximate meridian altitude of a star for setting the sextant.  
 (e.) To find the latitude from the meridian altitude of a star.  
 (f.) To find the longitude by chronometer by altitude of a star.  
 (g.) To find the true azimuth of a star by Time Azimuth Tables, and get the deviation therefrom.  
 (h.) To find the latitude by ex-meridian altitude of the sun or a star.  
 (i.) To find the line of position and the true bearing of the sun, and the ship's position, by Sumner's method of projection. (NOTE.—The candidate will be required to give a figure and explanation for each problem worked, and give a written explanation of any of the terms used in navigation or nautical astronomy that may be asked.)  
 (j.) To answer certain questions on meteorology.

He will be examined orally in the following subjects:—

- (k.) How to keep a ship's log-book.  
 (l.) How to calculate the capacity of a given bunker or hold.  
 (m.) How to calculate a freight and its commissions.