

*In Seamanship*—In addition to what is required for a Second Mate, he must know how to moor and unmoor, and to keep a clear anchor; to carry out an anchor; to stow a hold; and to make the requisite entries in Ship's Log.

He will also be questioned as to his knowledge of the use and management of the mortar and rocket lines in the case of the stranding of a vessel.

18.—A first Mate must be nineteen years of age and have served five years at sea, of which one year must have been as either Second or Only Mate.

*In Navigation*—In addition to the qualifications required for an Only Mate, he must be able to observe azimuths and compute the variation; to compare Chronometers and keep their rates, and find the longitude by them from an observation of the sun; to work the latitude by single altitude of the sun off the meridian; and be able to use and adjust the sextant by the sun.

*In Seamanship*—In addition to the qualifications required for an Only Mate, a more extensive knowledge of seamanship will be required as to shifting large spars and sails, managing a ship in stormy weather, taking in and making sail, shifting yards and masts, and getting heavy weights, anchors, &c., in and out; casting a ship on a lee shore; securing the masts in the event of accident to the bowsprits.

19.—A Master Ordinary must be twenty-one years of age, and have been six years at sea, of which at least one year must have been as First or Only Mate, and one year as Second Mate.

In addition to the qualification for a First Mate, he must be able to find the latitude by a star, &c. He must also be able to answer a certain number of the questions on Compass deviation contained in Circular 517, issued by the Board of Trade, 1871. He will be examined in so much of the laws of the tides as is necessary to enable him to shape a course and to compare his soundings with the depth of water marked on the charts. He will be examined as to his competency to construct jury rudders and rakes; and as to his resources for the preservation of the ship's crew in the event of wreck. He must be able to heave a ship down to get lower masts in and out, and to perform such other operations of like nature as the Examiner may consider necessary.

He must possess a sufficient knowledge of what he is required to do by law, as to entry and discharge, and the management of his crew, and as to penalties and entries to be made in the official log; and a knowledge of the measures for preventing and checking the outbreak of scurvy on board ship.

He will be questioned as to his knowledge of invoices, charter-party, Lloyd's agent, and as to the nature of bottomry; and he must be acquainted with the leading lights of the channel or coast he has been accustomed to navigate or which he is going to use.

From the 1st of August, 1881, Candidates for Second, Only, First Mates', and Masters' Certificates of Competency will, in addition to the present requirements for these grades, be required to pass an examination in the subjects specified below.

*In Navigation*—A Second Mate will be required to find the time of high water at a given port; to observe and calculate the amplitude of the sun, and to find the error of the ship's compass therefrom, and also the deviation, the variation being given. He must also be able to find the daily rate of the chronometer from error observed, and to find the longitude by altitude of the sun by the usual methods.

An Only Mate will be required to find the true bearing of the sun, and the error of the ship's compass from an observed azimuth