

- (g) Fix the ship's position by horizontal sextant angles, using a station-pointer for plotting them on the chart or plan, &c.
- (h) Give a method of finding approximately the time of high water at any place without the aid of the Admiralty or other tide tables.

84. Oral.

- (a) International regulations for prevention of collisions at sea and everything in para. 80 for second mate home-trade.
- (b) Anchor work; coming alongside; mooring and unmooring.
- (c) Fire-extinguishing appliances.
- (d) Rigging purchases for getting heavy weights in or out.
- (e) Handling of ship; rigging sea anchor, &c.
- (f) Use of sextant; to be able to observe with it, to read off and on the arc, and find the index error.

Any question appertaining to the duties of the mate of a home-trade ship which the Examiner may think necessary to ask.

MASTER.

85. A candidate must be not less than twenty-three years of age, and have served five years at sea, or three years at sea and two years in extended river limits, of which—

- (a) One year must have been in a capacity not lower than that of mate or only mate in the home trade whilst holding a home-trade mate's certificate or a foreign-going second mate's certificate; or
- (b) Two years and a half must have been in a capacity not lower than second mate in the home trade in charge of a watch whilst holding a home-trade mate's certificate or a foreign-going second mate's certificate (see para. 116); or
- (c) One year and a half must have been in a capacity not lower than that of second mate of a home-trade ship which is required by law to carry a certificated second mate; whilst holding a home-trade mate's certificate or a foreign-going second mate's certificate; or
- (d) One year must have been as master of a cargo vessel plying in the home trade whilst holding a certificate of competency as master of a cargo vessel under 25 tons register; or
- (e) One year must have been as master of a vessel of 50 tons register or upwards plying in the home trade whilst holding a certificate of service as master of a vessel of 50 tons register or upwards; or
- (f) One year and a half must have been as master of a vessel plying in the home trade whilst holding a certificate of service as master of a vessel under 50 tons register.

SYLLABUS.

86. Paper 1.—Practical Navigation. (Three hours.)

- (a) To find the latitude by meridian altitude of sun or star.
- (b) To find the distance from a point by methods published in New Zealand Nautical Almanac.
- (c) To answer certain practical questions on the subject of compass deviation.
- (d) To find the magnetic bearing of a distant object by swinging on equidistant compass points; to compute a deviation table.

87. Paper 2.—Practical Navigation. (Two hours.)

- (a) To find the true bearing of the sun or of a star by means of azimuth or amplitude tables; and from a compass bearing to find the compass error and deviation; variation being given.
- (b) To find longitude by chronometer from an altitude of sun or star, computing the daily rate of a chronometer from errors observed, when such is required; or
- (c) Find the position of ship by two stars at twilight, or by one star combined with the bearing of a distant mountain or headland, or sounding, by means of azimuth and reduction tables.

88. Paper 3.—Chart Work. (Three hours.)

A more extensive knowledge of the chart-work syllabus for mate.

89. Paper 4.—English. (One hour and a half.)

The paper will be designed to test the candidate's ability to write clear and grammatical English, with due attention to spelling and penmanship. It will be in no sense a test of technical knowledge.