

- (c) Bending, setting, and taking in fore and aft sails. Management of boats under oars and sail and in heavy weather. Beaching or landing. Coming alongside.
- (d) Helm orders. Conning the ship.
2. (a) Marking and use of ordinary lead-line.
- (b) Use and upkeep of mechanical logs and sounding-machines.
- (c) Use and upkeep of engine-room and other telegraphs.
- (d) Rocket and line throwing apparatus.
3. (a) Anchors and cables. Use, upkeep, and survey.
- (b) knowledge of use and maintenance of deck appliances and steering-gear.
- (c) Fire - extinguishing apparatus — steam, chemical, and other appliances.
4. (a) Preparations and precautions for getting under way. Duties prior to proceeding to sea, making harbour, or coming alongside, especially at after end of ship.
- (b) Keeping an anchor watch. Dragging anchor.
- (c) Duties of officer of the watch. Use of compass to ascertain risk of collision.
5. (a) A full knowledge of the content and application of the regulations for preventing collision at sea. (Candidates will not be placed in the position of handling a sailing-ship, but will be expected to recognize a sailing-ship's lights, and to have a knowledge of her possible manœuvres according to the direction of the wind.)
- (b) Distress and pilot signals; penalties for misuse.
- (c) British uniform system of buoyage.
- (d) An intelligent use of "Notices to Mariners." (Candidates will not be required to commit these to memory.)
6. *Signals.*
- To send and receive signals in—
- (a) British Semaphore up to eight words per minute.
- (b) Morse Code by flash-lamp up to six words per minute.
- (c) International Code of Signals.
7. *Practical.*
- (a) To read and understand a barometer, thermometer, hydrometer, and hygrometer. (The instruments supplied by the Meteorological Office will be taken as standard.)
- (b) To use an azimuth mirror, pelorus (bearing plate), or other instrument for taking bearings; to place these bearings on a chart, having corrected for given compass error.
- (c) To use a sextant for taking vertical and horizontal angles; to read a sextant both on and off the arc.
- (d) To correct a sextant into which has been introduced some or all of perpendicularity, side and index errors.
- (e) To find the index error of a given sextant.
- (f) To check chronometers by signal made by buzzer or other method; to compare two chronometers.
8. The Examiner may ask the candidate questions arising out of the written work, if he deems it necessary on account of weakness shown by the candidate. (This applies particularly to Paper 5.)

FIRST MATE (FOREIGN-GOING).

43. Qualifications.*—A candidate must not be less than twenty-one and a half years of age, and must have served five and a half years at sea in foreign-going ships or the equivalent, eight years and three months, in home trade ships (*see paras. 112 and 113*). This period of sea service must include *either*

- (a) Eighteen months in a capacity not lower than that of third of three watchkeeping officers on a foreign-going ship whilst holding a certificate as second mate of a foreign-going ship (*see also para. 116*); *or*
- (b) Two years and three months in a capacity not lower than that of first or only mate of a home trade ship whilst holding a certificate as second mate of a foreign-going ship (*see also para. 112 for conditions under which service as second mate of a home-trade ship may be accepted*).

* For convenience of calculation the service required is stated in a tabular form to in Appendix I.