

SPECIMEN SET OF EXAMINATION PAPERS FOR MASTER,  
FOREIGN-GOING.

**PRACTICAL NAVIGATION.**

Paper 1 (3 hours).

1. On 24th May, 1929, at about 8 h. 05 m. a.m., the position by D.R. being Lat.  $48^{\circ} 05' N.$ , Long. by account  $22^{\circ} 05' W.$ , the observed altitude of the Sun's L.L. was  $35^{\circ} 57'$ . Height of eye, 31 ft. G.M.T., 9 h. 31 m. 29 s.  
Find the position line upon which the ship is situated.  
Again, at about 3 h. 54 m. p.m. on the same day, the observed altitude of the Sun's L.L. was observed to be  $35^{\circ} 54'$ . Height of eye as before. G.M.T., 17 h. 11 m. 55 s.  
Find the position of the ship at the time of this observation by combining the two observations, the course and distance in the interval being  $067^{\circ} 82$  miles. (N.B.—Squared paper only supplied.)
2. Find the A.T.S. of the meridian passage of the star  $\alpha$  Canis Minoris (Procyon) on 24th February, 1929, in Lat.  $40^{\circ} 10' S.$ , Long.  $20^{\circ} 18' W.$ , by D.R.
3. On 4th August, 1929, at about 11 h. 37 m. a.m., the position by D.R. being Lat.  $33^{\circ} 24' S.$ , Long.  $6^{\circ} 08' E.$ , an ex-meridian altitude of the Sun's L.L. was  $38^{\circ} 54'$ . Height of eye, 25 ft. The correct G.M.T. was 11 h. 18 m. 10 s.  
Find the latitude and thence the position line.
4. From Part II, Section II, of the Tide Tables, calculate the height of tide off Penzance on 10th July, 1929, at 03 h. G.M.T.
5. On (given date), 1929, whilst approaching the entrance to the St. George's Channel from the S.W. ward in thick weather, steering  $040^{\circ}$ , steaming at 4.5 knots, the position by account being Lat.  $51^{\circ} 54' N.$ , Long.  $6^{\circ} 30' W.$ , the following casts of the lead were taken at  $\frac{1}{4}$  hour intervals corrected to Datum: 32, 31, 30, 28, 29, 32, 28 fathoms, with a bottom of sand in each case, the first cast taken at (given time) G.M.T.  
Estimate the position of the ship at time of last cast, and say what alteration of course you would consider necessary to pass 3 miles clear S.E. wards of Tuskar Rock.

**METEOROLOGY.**

Paper 2 (2 hours).

1. Give a general description of the winds and currents which usually prevail in the month of July in the Arabian Sea; and supposing that you are at Colombo in a medium powered steamer laden and bound for Aden, indicate the track that you would follow and the winds and currents you would expect to encounter along this track, giving your reasons for taking it.
2. (a) Describe the origin of the icebergs which constitute a danger to navigation in the North Atlantic and how they get there.  
(b) Are there any reliable indications of the proximity of ice when visibility is bad?  
(c) What steps are taken during the ice season in the vicinity of the Grand Banks of Newfoundland to warn shipping of ice; and how are the Trans-Atlantic Lane routes affected by the prevalence of ice?  
Where is information of the Trans-Atlantic Lane routes in force to be found? Who is responsible for regulating the routes in force?
3. At 0700 G.M.T. on 11th November, 1929, you are on board the steamship A in Lat.  $46^{\circ} 59' N.$ , Long.  $6^{\circ} 35' W.$ , bound for London. You make the following observations at 7 a.m. G.M.T., and receive by wireless reports from selected ships as under. You also receive the British Weather Shipping Bulletin, from which coded coast station reports are as follows.