2. The bearing of two objects in transit was found on the chart to be S.W. ¼ S. mag., but when brought in line on board they bore S.W. ¼ W. by compass :

Required—The deviation of the compass for the direction of the ship's head.

3. Required the times of high and low water, a.m. and p.m., at Port Russell on 12th May, 1925, by the tide-tables in the "New Zealand Nautical Almanac."

All the foregoing questions must be answered : but this does not preclude the Examiner from putting any other questions of a practical nature.

187. Specimen Examination-paper for Second Mate (H.T.) :—

ARITHMETIC AND NAVIGATION.

Time allowed 2 hours.

1. Express in figures—Twenty-four millions seven hundred and two thousand ; five hundred and nine thousand and four.
2. Add the following quantities together : 1402, 86, 903, 7284, 16708 ; also add together 72498, 60382, 704, 208, 7.
3. From 6840298 take 3826989 ; from 684062 take 508349 ; from 1800426 take 99849 ; from 1638072 take 899708.
4. Multiply 9886 by 37 ; multiply 98486 by 3972.
5. Divide 38409687 by 3837 ; divide 943068 by 14.
6. Add the following quantities together : £8468 9s. 4d., £1306 3s. 10d., £1608 4s. 6d., £3089 11s. 7d. Also add together 9843 tons 16 cwt. 2 qr. 14 lb ; 4860 tons 13 cwt. 3 qr. 2 lb. ; 90 tons 18 cwt. 2 qr. 23 lb. ; 6028 tons 16 cwt. 1 qr. 3 lb.
7. From £6488 17s. 6½d. take £5840 3s. 9¾d. ; and from 54833 tons 16 cwt. 2 qr. 2 lb. take 9808 tons 3 cwt. 0 qr. 4 lb.
8. Multiply the following quantities by 92 : £1840 4s. 6d. ; 284 tons 16 cwt. 3 qr. 4 lb.
9. Divide the following quantities by 67 : £134 2s. 10d. ; 6094 tons 3 cwt. 1 qr. 18 lb.
10. In a vessel steering south by compass and steaming 10 knots a point of land bore S. 15° W. by compass, and after making good the course and speed for 15 minutes the point bore S. 30° W. by compass :

Required—The distance of the vessel from the point of land when abeam.

188. Specimen Set of Examination-papers for Mate (H.T.) :—

1. ARITHMETIC AND NAVIGATION.

Time allowed 2 hours.

1. Express in figures—Five millions sixteen thousand seven hundred and six ; thirteen millions four thousand two hundred and one.
2. Add the following quantities together : 684092, 78064, 90284, 70987, 45298 ; also add together 4624, 30897, 604838, 908421, 904.
3. From 6087241 take 904563 ; from 64889 take 38421 ; from 778794 take 389006 ; from 8296 take 999.
4. Multiply 86298 by 999 ; multiply 64862 by 787.
5. Divide 984629 by 378 ; divide 8406823 by 9984.
6. Add the following quantities together : £724 14s. 3d. ; £680 19s. 6d. ; £280 13s. 10d. ; £60 4s. 10d. Also add together 9846 tons 13 cwt. 2 qr. 3 lb. ; 68 tons 3 cwt. 1 qr. 14 lb. ; 806 tons 3 cwt. 3 qr. 10 lb. ; 983 tons 19 cwt. 3 qr. 7 lb.
7. From £39802 14s. 6½d. take £986 17s. 7¾d. ; from 6842 tons 13 cwt. 2 qr. 8 lb. take 747 tons 18 cwt. 3 qr. 9 lb.
8. Multiply the following quantities by 89 : £760 3s. 10½d. ; 6089 tons 18 cwt. 2 qr. 16 lb.
9. Divide the following quantities by 72 : £8049 3s. 6¾d. ; 7284 tons 1 cwt. 1 qr. 2 lb.
10. On 20th January, 1925, long. by A/c 172° 50′ E., the observed meridian altitude of the sun's lower limb was 70° 14′·5 north of the observer ; index error of sextant 2′ 40″ to add ; height of eye 27 ft. Compute the latitude.
11. On 15th May, 1925, at 06 h. 50 m., New Zealand mean time, at ship in lat. 41° 15′ S., long. 176° 40′ E., the sun rose bearing by compass N.E. :

Required—The true amplitude and error of the compass ; also the deviation, the variation being 15° E.