

(b) Thorough knowledge of and ability to use navigational charts and publications, such as sailing directions, tide tables, notices to mariners, radio navigational warnings and ships' routing information.

3. *Radar navigation*

Knowledge of the fundamentals of radar and ability in the operation and use of radar and ability to interpret and analyse information obtained by use of radar including the following:

- (a) factors affecting performance and accuracy;
- (b) setting up and maintaining displays;
- (c) detection of misrepresentation of information, false echoes, sea return, etc.;
- (d) range and bearing;
- (e) identification of critical echoes;
- (f) course and speed of other ships;
- (g) time and distance of closest approach of crossing, meeting or overtaking ships;
- (h) detecting course and speed changes of other ships;
- (i) effect of changes in own ship's course or speed or both;
- (j) application of the International Regulations for Preventing Collisions at Sea.

4. *Watchkeeping*

(a) Demonstrate thorough knowledge of content, application and intent of the International Regulations for Preventing Collisions at Sea, including those Annexes concerned with safe navigation.

(b) Demonstrate knowledge of content of Regulation II/1 – "Basic Principles to be Observed in Keeping a Navigational Watch".

5. *Electronic systems of position fixing and navigation*

Ability to determine the ship's position by the use of electronic navigational aids to the satisfaction of the Administration.

6. *Radio direction-finders and echo-sounders*

Ability to operate the equipment and apply the information correctly.

7. *Meteorology*

Knowledge of shipborne meteorological instruments and their application. Knowledge of the characteristics of various weather systems, reporting procedures and recording systems and the ability to apply the meteorological information available.