OOW Unlimited Navigation Syllabus

Notes

1. The syllabus is based on the HND in Nautical Science. It covers Outcomes 3 of Unit 2 (Chartwork), Outcomes 2 & 3 of Unit 3 (Tides and Sailings) and Outcome 2 of Unit 5 (Bridge Watchkeeping)
2. Extracts of the Hydrographic Office publications, Nautical Almanac and Tide Tables, will be required for examinations
3. Formula sheets will be provided to candidates for the examination

1. Stages of making a passage plan

a) Explains appraisal, planning, execution and monitoring of a passage plan

2. Following a passage plan

a) Describes the procedure for monitoring and executing a passage plan

b) Identifies charted objects suitable for position fixing

c) Identifies chart symbols and abbreviations

d) Explains the procedure for monitoring the progress of the vessel on a pre-planned track

e) Explains the precautions to be taken when making a landfall

3. Routeing instructions and guidelines

a) Describes content and use of IMO Ships Routeing Guide

b) Interprets IRPCS Rule 10

c) Explains use of Admiralty chart 5500, Mariners Routeing Guide

4. Adjusts vessels course and speed to take account of passage plan requirements

a) Plots the position of the vessel on a chart using latitude and longitude, or position lines derived from charted objects or from celestial observations including running fix and horizontal angles

b) Determines the effect of current/tidal stream by construction on a chart

c) Determines the effect of wind on ship's track

d) Applies leeway to find course to steer

e) Determines course to steer to counteract current/tidal stream by construction on a chart

f) Determines speed made good by measurement on the chart and calculates ETA

g) Determines speed required to make ETA at a passage plan way point by measurement on the chart

h) Applies magnetic and/or gyro compass errors to convert True to Compass and vice versa for ship's head and bearings

i) Calculates adjustments to course for a change in magnetic or gyro compass error

5. Plane and Parallel Sailing

a) Explains the relationship between Departure and D Long

b) Converts Departure to D Long and vice versa

c) Calculates course and distance by plane sailing formula

d) Calculates course and distance using parallel sailing formula

e) Calculates ETA

6. Meridional parts, DMP and Mercator sailing formula

a) Describes the navigational properties of a Mercator Chart

b) Calculates course and distance between waypoints using Mercator Sailing formula

c) Calculates ETA at given waypoint, including the use of time zones

7. Bridge watchkeeping procedures

a) Demonstrates a knowledge of current national and international regulations and guidelines for bridge watchkeeping procedures

b) Describes criteria and procedure for calling the Master when in doubt of ship's position

c) Specifies checks to navigation equipment

d) Calculates Compass Error by Azimuth/Amplitude

8. Communications between Bridge and Machinery Spaces

a) Describes routine and emergency communication procedures including use of telegraphs, instruments, Bridge Control Systems and other communication systems

b) Explains the need to record orders, communications and information

c) Explains reasons for giving Bridge and Engine Room notice of reductions in speed

9. Navigation in the proximity of ice

a) Lists signs indicating the proximity of ice

b) Describes methods of avoiding or reducing ice accumulation and accretion

c) Explains obligation to report ice and ice accretion

10. Cause of tides and definitions

a) States the cause of spring tides

b) States the cause of neap tides

c) Defines chart datum, height of tide, MHWS, MLWS, MHWN, MLWN, range of tide, drying height, height of charted objects

11. Finding the tidal information at standard ports - Worldwide

a) Finds the height and time of high water using tide tables

b) Finds the height and time of low water using tide tables

c) Calculates the height of tide at a given time using tide tables and tidal curves

d) Calculates the time the tide will reach a given height using tide tables and tidal curves

e) Discusses the reliability of tidal predictions

f) Calculates the correction of soundings to chart datum

12. Finding the tidal information at secondary ports - Worldwide

a) Calculates the height and time of high water using tide tables

b) Calculates the height and time of low water using tide tables

c) Calculates the height of tide at a given time using tide tables and tidal curves

d) Calculates the time the tide will reach a given height using tide tables and tidal curves