

Appendix 2 - Syllabus for the AMSA oral examination, Certificate of Competency, Master <500 GT, Mate <500 GT and Master 24m Foreign Going

Notes to candidates:

1. It should be noted that the following is not a fully detailed list of oral questions, but a list of topics about which candidates are expected to have adequate knowledge, and is provided for the guidance of candidates only
2. The Examiner may ask any questions relevant to the following topic areas, and / or ask the candidate to provide answers in diagrammatic form, or to complete simple calculations, to the extent necessary to test the candidates competency in the managerial, operational and safety aspects related to the duties of the grade of certificate applied for.
3. Candidates for both the Master and Mate grades of certificate can be asked questions from all sections listed, however the focus of the questions and the assessment, will be related to the main management responsibilities and shipboard duties involved in the certificate being applied for.
4. As this syllabus also incorporates the syllabus for lower grade certificates, the Examiner may ask questions related to those lower grade certificates as it affects the overall safe operation of the vessel.
5. Candidates should note that they may be required to demonstrate their proficiency in RADAR plotting and chart-work.
6. During the examination, candidates will be required to demonstrate that they possess an adequate knowledge and understanding in the use of the English language.
7. Candidates for Mate < 500GT should note that as the highest level of endorsement on this Certificate of Competency allows the holder to serve as Master on vessels less than 500GT on near coastal voyages, therefore command related questions will form part of this examination.

Section 1: Management

- Knowledge of ship inspection programmes and the roll of Port State control and Flag State Control Officers
- Knowledge of a ships required certification, documentation and records.
- Basic knowledge of classification societies, the classification and surveys of ships and equipment.
- Knowledge of appropriate Australian legislation, statutory requirements, including the International Management Code for the Safe Operation of Ships and for Pollution Prevention (ISM Code) and the application thereof.
- Knowledge of relevant International Codes and Conventions and the application thereof.

- Knowledge of Australian Occupational Health & Safety legislation as it applies to the maritime industry.
- Basic knowledge of ship administration duties and shipmasters business
- Joining a vessel as Master or Chief Mate and the responsibilities and duties involved

Section 2: Standards of watchkeeping

- Principals to be observed in keeping a watch in port, on the bridge watch at sea, at anchor and under pilotage and Voyage planning berth to berth
- Principles of bridge resource management
- Protection of the marine environment

Section 3: Bridge equipment

- Basic principles and knowledge of the different types of bridge and navigation equipment, along with the practical operation, testing, errors and precautions associated with the use of such equipment.

Section 4: Navigation, charts and publications

- Full knowledge of the use of information contained in Australian, International Maritime Organisation, and Admiralty publications pertaining to safe navigation, and the maintenance of such publications.
- Basic knowledge of ship reporting systems and the promulgation of all relevant maritime safety information.
- Knowledge of the use of charts and interpretation of charted information, including the general principles of voyage planning.
- Knowledge of all aspects of practical navigation and obtaining tidal information required by senior management shipboard personnel

Section 5: Stress and stability

- Practical knowledge and use of all relevant sources of information to safely load a vessel and assess a vessels stability condition, trim and list.
- Principles of ship stability
- Knowledge of Load lines and seasonal zones, drafts and the effects of changes in water density
- Understanding the different types of shipboard stresses and means of reducing such stresses.
- Management of free surface effects

Section 6: Cargo work

- Basic knowledge of Australian and International legislation, and an understanding of the general principles and practice, relating to the carriage, stowage, securing, loading and unloading of cargoes on various relevant vessel types.
- Knowledge of typical cargo handling equipment found on various relevant vessel types.
- Knowledge of all aspects on confined space entry
- Knowledge of the contents and application of publications for carriage of dangerous good

Section 7: Ship handling

- Basic knowledge of manoeuvring techniques, principles and characteristics for the various relevant ship types, and their propulsion systems.
- Knowledge of the safe principles of anchoring, mooring and unmooring, anchoring and heaving to
- Basic knowledge of the safe embarking and disembarking of pilots and the use of tugs
- Knowledge of interaction and other factors affecting manoeuvring in narrow channels and shallow water
- Knowledge of the principles involved in the launch and recovery of rescue craft
- Management of a vessel in adverse weather and the effect of wave impact on a vessel, the effect of adverse weather on various ship operations involving manoeuvring

Section 8: Prevention of pollution

- Knowledge of Australian and International legislation in relation to pollution
- Safe management principles of all relevant shipboard precautions to prevent pollution.
- Knowledge of the actions to be taken in event of a pollution incident
- Knowledge of bunkering precautions

Section 9: Emergency situations / Response and equipment

- Knowledge of contemporary safety issues, reports and papers, affecting the maritime industry
- Management level response to various shipboard emergency situations both in port and at sea
- Principles of damage control
- Obligations to render assistance and in sending emergency signals

- Recognition of signs of approach of heavy weather, and actions to be taken.
- Basic knowledge of the safe principles of towing operations

Section 10: Dry docking

- A basic knowledge of the preparations for docking and undocking including stability issues
- Knowledge of the precautions and dangers whilst in dock
- Management of Occupational Health & Safety issues in dock

Section 11: Search and rescue

- Knowledge of search and rescue publications, procedures, communications and equipment
- Knowledge of survival techniques

Section 12: Essential shipboard equipment and machinery

- Knowledge of the operation of various relevant types of shipboard fire fighting and life saving equipment, together with an understanding of the associated safety aspects and precautions related to the operation of such equipment.
- Operation, maintenance and inspection requirements of essential shipboard equipment, deck appliances and machinery
- Management and organisation of statutory drills.
- Knowledge of all factors affecting the watertight integrity of the ship
- Knowledge of correct operation of on load release gear for survival craft

Section 13: Collision avoidance

- The application and content of the International Regulations for Preventing Collisions at Sea Collision avoidance
- Knowledge of the internationally adopted system of buoyage.