

Master – UNLIMITED TONNAGE – NEAR-COASTAL

Candidate should demonstrate the ability to apply the knowledge outlined in this oral examination syllabus and oral examination syllabus **Deck – D**, by appropriate responses, anticipations and reactions to a range of routine, non-routine and contingency scenarios as presented by the examiner, from the perspective of **MASTER – UNLIMITED TONNAGE – NEAR-COASTAL**.

TOPIC 1 NAVIGATION**.1 Plan and Conduct Safe Navigation**

- a) demonstrate an ability to undertake voyage planning and navigation, taking into consideration:
 - i. Restricted waters;
 - ii. Meteorological conditions, through the interpretation of a synoptic chart, and to forecast local area weather, the characteristics of various weather systems;
 - iii. Restricted visibility;
 - iv. The requirements of ship routeing and mandatory reporting systems;
 - v. Reporting in accordance with ship reporting systems;
- b) maritime buoyage systems – IALA region ‘A’.
- c) danger messages and obligatory reporting requirements.

.2 Establishing Safe Navigational Watchkeeping Arrangements and Procedures

- a) a thorough knowledge of the principles of navigational watchkeeping at sea, including under pilotage, at anchor and in port;
- b) a thorough knowledge of the content, application and intent of the International regulations for the prevention of collision at sea;
- c) knowledge and application of the ICS Bridge Procedures Guide;
- d) limitations and risks involved with the use of ECDIS and RCDS; inter-relationship and optimum use of all navigational information available;
- e) knowledge of principles of establishing a safe engineering watch at sea, anchor and in port.

.3 Compasses

- a) the operation and care of various types of compasses;
- b) care and maintenance of the magnetic compass and binnacle;

- c) knowledge of the purpose and use of compass correctors (candidates will not be required to demonstrate a compass correction procedures);
- d) Knowledge of how to find the magnetic bearing of a distant object and subsequent construction of a deviation card.

.4 Manoeuvre the ship

- a) knowledge of manoeuvring and propulsion characteristics of ships, with special reference to stopping distances and turning circles at various draughts and speeds, squat and inter-action;
- b) importance of navigating at reduced speed to avoid damage caused by own ship's bow wave and stern wave;
- c) demonstrate an understanding of ship manoeuvres commonly undertaken under all weather conditions including: berthing and un-berthing, approaching pilot stations, restricted waters and shallow water;
- d) management and handling of ships in heavy weather;
- e) choice of anchorage and working anchors in all circumstances;
- f) precautions when manoeuvring to launch rescue boats or survival craft in bad weather.

TOPIC 2 CARGO HANDLING AND STOWAGE

.1 Plan and Ensure Safe Loading, Stowage, Securing, Care During Voyage and Unloading of Cargoes

- a) knowledge and ability to apply relevant international regulations, codes and guidelines concerning the safe handling, stowage, securing and transport of cargoes.

TOPIC 3 RESPONSE TO EMERGENCIES

.1 Response to Navigational Emergencies

- a) precautions when beaching a ship;
- b) grounding: action to be taken when imminent, after grounding and re-floating, and subsequent surveys;
- c) measures to be taken following exceptional circumstances including loss of rudder and/or propeller and impairment of watertight integrity of the ship through any cause;
- d) emergency towing arrangements and towing procedures;
- e) plan and co-ordinate SAR operations, including establishing and maintaining effective communications.

.2 Response to Other Emergencies

- a) preparation of contingency plans for response to emergencies;
- b) actions to be taken when disabled and in distress;
- c) organisation of fire and abandon ship exercises;
- d) methods and aids for fire prevention, detection and extinction;
- e) functions and use of life saving appliances;
- f) abandoning ship and survival procedure;
- g) SAR plans for passenger ships;
- h) maintenance of operational conditions of life saving appliances, firefighting appliances and other safety systems;
- i) knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and counter measures to be taken;
- j) action to limit damage and save the ship following a fire, explosion, collision or grounding, including protection of the marine environment;
- k) action to safe guard all persons on board in emergencies;
- l) assisting a ship or aircraft in distress.

TOPIC 4 ON BOARD SHIP OPERATIONS

.1 Compliance with Pollution Prevention Requirements

- a) responsibilities under International Convention for Prevention of Pollution including masters' duties, obligations and liabilities, including the keeping of records;
- b) methods and equipment to prevent pollution.

.2 Seaworthiness of the Ship

- a) effect of heavy weather on the ship's structure;
- b) effect upon ship behaviour of lists, stiff and tender stability conditions, large angles of heel and associated righting precautions: the effect upon different cargoes;
- c) the importance of free surface effects and the identification and correction of an angle of loll;
- d) specific effects on stability and stress caused by ship type or nature of trade.

.3 Crew Management

- a) knowledge of personnel management, organisation and training including disciplinary procedures;
- b) application of hours of work and rest legislation.

.4 Maintain Safety of Ships Crew and Passengers

- a) master's responsibility with respect to stowaways and prevention of smuggling;
- b) precautions to safeguard against terrorism, piracy and armed robbery;
- c) methods of pest control, fumigation of holds and living spaces, safeguards in applying various methods.

.5 Legislative Requirements

- a) knowledge and application of current Merchant Shipping Health and Safety legislation including the Code of Safe Working Practices for Merchant Seamen and the main elements of Risk Assessment;
- b) safe manning, crew agreements, conditions of employment, official log book and the law relating to entries;
- c) knowledge of international conventions relevant to the operation of ships, including certificates and other documents required to be carried on board ships;
- d) requirements for statutory and classification surveys;
- e) reports required by the Marine Accident Investigation Branch (MAIB);
- f) putting into port with damage to ship and/or cargo, both from business and technical points of view, safeguarding of cargo;
- g) towage and salvage agreements;
- h) obligations with respect to pilotage;
- i) maritime declarations of health and requirements of the international health regulations;
- j) purpose and application of the International Safety Management (ISM) Code.