South African
Maritime Safety Authority

Marine Notice No. 23 of 2007

Level 3 assessments (Deck): Guidance for SAMSA oral examinations

TO SHIP OPERATORS, SEAFARERS, MARITIME TRAINING INSTITUTIONS AND PRINCIPAL OFFICERS

Summary

This marine notice gives guidance regarding the application of the *Merchant Shipping (Training and Certification) Regulations 1999* and it's Code with respect to the conducting of level 3 assessments (oral examinations) and the syllabuses for STCW'95 and non-STCW'95 certificates of competency. It also introduces the general examination structure and general procedures with respect to the level 3 assessment.

1 The *Merchant Shipping (Training and Certification) Regulations, 1999* state that all candidates are required to pass a level 3 assessment (oral examination) by a SAMSA appointed examiner at an exam centre. The exam centres for the issue of a certificate of competency as detailed in the *Merchant Shipping (Training and Certification) Regulations, 1999* shall be either Cape Town or Durban.

2 The issue of a certificate of competency is the final stage in a seafarers training to attain the desired certificate and follows the following general procedure:

i) Evidence of the required medical physical fitness and eye sight standards;
ii) Completion of initial training requirements including specified sea service for the level of certificate desired;
iii) Completion appropriate watch-keeping experience;
iv) Successful completion of approved training programmes and assessments;
v) Successful completion of all ancillary training as detailed in the *Merchant Shipping (Training and Certification) Regulations,1999*;
vi) Full completion of the application form for the assessment; and
vii) Success in the SAMSA oral assessment.

3 The oral assessment is not generally required for ratings certification issued under STCW '95 Regulation II/4 but the appointed examiner dealing with such applications can conduct an oral assessment should he/she deem it necessary. This shall only be conducted if there is reasonable doubt as to the content of the application or any other documentation pertaining to such application.

4 The SAMSA oral assessment is aimed at ensuring that the applicant's ability to undertake the duties associated to the appropriate certificate desired. Oral assessments are the final procedure for the attainment of all SAMSA certificates of competency and all candidates are required to have an adequate knowledge of the English language to a standard of at least that detailed in the IMO SMCP (Standard Marine Communication Phrases) Guide.

5 The assessment syllabuses are divided into topics. Each topic contains a series of questions relating to responsibilities considered necessary for ship operations, safety of life at sea, and protection of the marine environment. The level of knowledge required in each topic will depend on the level of responsibility which is being assessed, i.e. management level for Master and Chief Mates or operation level for Officers of the Watch. Although there are cases that seafarers go back to sea at a rank lower that the certificate obtained, the assessment is for the certificate being assessed and not the rank that the person is going serve at sea.

6 Candidates seeking the certificates of competency as a deck officer shall follow the oral assessment syllabus as detailed in Annexes 1 – 7.

7 Before being considered for the SAMSA oral assessment, candidates must apply at any SAMSA office at least three weeks before the assessment. The examiner will then scrutinise the application and if the candidate fulfils all the requirements of the level of certificate being applied for, the examiner will set a date and time for the assessment which will be timeously advised to the candidate. Candidates may request a specific date but this cannot be guaranteed. However the examiner shall endeavour to accommodate the candidate for the desired date.

8 An application for examination is only valid for one assessment attempt and any subsequent attempts must be applied for again in the usual manner.

9 The oral assessment shall be conducted at Cape Town or Durban but SAMSA can exercise discretion in conducting it at other centres but only in exceptional circumstances.

10 The result of the assessment will be noted by the examiner and a certificate issued stating whether or not the candidate was successful. In the case where the candidate was not successful and the weakness in the assessment was serious, the examiner shall determine if further sea service is required and impose such sea service prior to the candidate being eligible to redo the assessment. In any event at least the date upon which the candidate is eligible to attempt the assessment again shall be reflected on the certificate. For those candidates who are successful, a certificate shall be issued stating that the candidate was successful and for which rank, with any limitations, the candidate was successful in obtaining, with the appropriate STCW references.

11 A candidate not appearing or the oral assessment at the appointed time shall be deemed to be unsuccessful by default unless it can be proved to the satisfaction of the examiner that the failure to attend was unavoidable.

12 Any candidate involved in irregular behaviour (for example cheating or any false declaration in the application) shall be considered to be unsuccessful and this shall be referred to the senior examiner stating the circumstances and actions of the candidate. The circumstances of reported cases shall be considered individually and may result in the candidate being barred from being assessed for a specific period of time or resulting in further sea service being completed.

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Issued by and obtainable from:
The South African Maritime Safety Authority
161 Lynnwood Road
Brooklyn, Pretoria

PO Box 13186
Hatfield 0028

Tel: +27 12 366 2600
Fax:+27 12 366 2601
E-mail: marinenotices@samsa.org.za
Web Site : www.samsa.org.za

ANNEX 1

MASTER/SKIPPER (PORT OPERATIONS) ORAL EXAMINATION SYLLABUS-VESSELS UNDER AND OVER 200 GT

TOPIC ONE: COLLISION REGULATIONS

1 **General**

(a) Application of Rules, definitions, Rule 2(b)
(b) Look out and safe speed
(c) Risk of collision, scanty information and action taken to avoid a collision
(d) Narrow channels and Traffic Separation Schemes

2 **Lights, shapes, fog signals and additional signals**

(a) Lights, shapes and fog signals of all types of vessels. Models or cards shall be used for this part of the examination
(b) Arc and range of visibility of lights for various lengths and types of vessels. Details of shapes

3 **Conduct of vessels in sights of one another**

(a) Responsibilities between vessels, action of give way and stand on vessels
(b) Action to take to avoid collision by use of models for all cases, including end on, crossing and overtaking
(c) Action to take when in a multiple vessel situation, by use of models
(d) Describe the procedures for routine navigational and collision avoidance manoeuvers

4 **Conduct of vessels not in sight of one another**
a) Thorough knowledge of Rule 19
b) Single and multiple vessel collision situations in restricted visibility

5 **Annexes to Collision Regulations an other items**

a) Distress signals
b) Describe the contents of Masters standing orders and expectations from the officers of the watch

TOPIC TWO: EXCEPTIONAL CIRCUMSTANCES

1 **Exceptional circumstances**

(a) Demonstrate the ability to act decisively in situations that put the vessel in possible or real peril such as loss of rudder and or propeller
(b) Explain the legal and practical actions after a collision or sustaining hull damage from any cause
(c) Explain the actions after grounding and methods of re-floating
(d) Explain the actions when experiencing loss of power in confined waters or on a lee shore
(e) Explain the actions when experiencing E/R emergencies such as crankcase explosions, generator failure, fire etc.
(f) Devise a contingency plan due to structural failure, leaking hatch covers, cracks to the deck and hull and flooding

2 **Preservation of passengers and crew**

(a) Describe the steps and procedure to be taken when a vessel is in distress as a result of grounding, collision, fire or foundering
(b) Describe the procedures to ensure survival following abandoning ship
(c) Describe recognised distress procedures when communicating with another station
(d) Explain various methods for rescuing of passengers and crew by helicopter, other vessels and rocket apparatus

3 **Search and Rescue**

(a) Describe methods of rescuing survivors of casualties, manoeuvring of vessels close to a casualty, launching a recovery of boats in a seaway and treatment of survivors

4 **Oil pollution and other items**

(a) Describe actions and statutory obligations to be taken after accidental or deliberate pollution by oil or other noxious substances
(b) Describe actions to be taken when passengers or crew are injured at or in port
(c) Explain the Master=s statutory obligations responsibilities as a result of a marine casualty

TOPIC THREE: SHIP HANDLING AND TOWAGE

1 **Manoeuvring**

(a) Demonstrate with models the ability to manoeuvre to a berth, alongside a quay or jetty, to single buoy mooring and to leave from buoys and other types of SBM=s
(b) Demonstrate the use of anchors and cables both for manoeuvring and berthing a vessel with or without currents and wind
(c) Demonstrate with models the turning circles and manoeuvring data of ships

2 **Towing and being towed**

(a) Discuss the precautions to be taken before, after and during towing en route and how to avoid chaffing

TOPIC FOUR: DRYDOCKING

1 **Drydocking**

(a) State particulars to be provided to the dockmaster and records of previous drydockings
(b) State the optimum conditions for drydocking
(c) State the precautions to be taken in drydock
(d) State the precautions to be taken before undocking
(e) State the precautions to be taken during undocking

TOPIC FIVE: PREVENTION OF FIRE, PEST CONTROL, PERSONNEL MANAGEMENT

1 Prevention of fire

(a) Define terms such as flammable, non-flammable, toxic vapours, combustible, flash point, ignition temperature
(b) Explain the advantages and disadvantages of certain fire-fighting mediums
(c) Describe crew organisation for fire fighting
(d) Discuss the tactical organisation and actions required in any fire situation
(e) Discuss the tactical organisation and actions required after any fire situation both from a legal and practical point of view
(f) Demonstrate knowledge of how and why all types of fire appliances should be tested and importance of drills
(g) Demonstrate knowledge of fire precautions in port
(h) Explain the contents of the Masters standing orders in port especially with regard to fire patrols

2 Pest Control

(a) Describe methods of preventing infestation and fumigation especially with regard to safety precautions before and after fumigation

3 Personnel management, organisation and training

(a) Demonstrate an understanding of the crew welfare sections of the MSA
(b) Demonstrate an understanding of a Contract of Employment
(c) Describe the seaman=s right to wages and employer=s duties to pay such wages
(d) Discuss the role of the Master as a manager in respect of planning, delegation, and their authority and responsibilities.
(e) Demonstrate knowledge of the concept of modern management practices, motivation of crew, job satisfaction and good communication
(f) Demonstrate a good understanding of budgets and control of expenditure
(g) Resolve typical crew problems relating to articles, other transgressions, contract of employment and penalties under the MSA
(h) Describe the procedure for handling crew complaints
(i) Describe how to conduct a disciplinary hearing and entries in the OLB
(j) Describe and explain the entries to be made in the OLB
(k) Show knowledge of completing documents such as Discharge Books, Watch-keeping Certificates, Record Books, and Overtime.
(l) Describe the role played by all the officers with respect to training of junior officers and ratings
(m) Describe fully the actions and checks when taking over command in different circumstances such as a new ship, second hand ship, sick Master

TOPIC SIX: COMPASSES, REGULATIONS AND SAFETY CONVENTIONS

1 Compasses

(a) Identify possible causes of unreliable or fluctuating compasses or large deviations for certain headings and practical steps to correct these
(b) Describe how and why it is necessary to keep a compass in good order

2 **Regulations and Acts**

(a) Demonstrate a working knowledge of the LSA Regulations, Safety of Navigation Regulations, Loadline Regulations, ISM Regulations, ISPS Regulations, Radio Regulations, Chart and Nautical Publications Regulations
(b) Knowledge of the obligations of the Master in terms of the Training and Certification Regulations with respect to training
(c) Safe Manning Regulations
(d) Demonstrate a working knowledge of the contents of the MSA relating to seaworthiness and detention how they affect the operation of the vessel
(e) Demonstrate an understanding of circumstances leading to the detention of a vessel and the method by which it is detained
(f) Demonstrate a full knowledge of all statutory certification and validity thereof
(g) Demonstrate an understanding of procedures for inspections and surveys and maintenance of records of such inspections and surveys

Note:
The depth of knowledge in each topic for the Master (Port Operations) shall be more in depth than that for the Skipper (Port Operations)

ANNEX 2

SKIPPER (COASTAL)/(UNLIMITED) ORAL EXAMINATION SYLLABUS – VESSELS UNDER 200 GT

TOPIC ONE: COLLISION REGULATIONS

1 **General**

(a) Application of Rules, definitions, Rule 2(b)
(b) Look out and safe speed
(c) Risk of collision, scanty information and action taken to avoid a collision
(d) Narrow channels and Traffic Separation Schemes

2 **Lights, shapes, fog signals and additional signals**

(a) Lights, shapes and fog signals of all types of vessels. Models or cards shall be used for this part of the examination.
(b) Arc and range of visibility of lights for various lengths and types of vessels. Details of shapes

3 **Conduct of vessels in sights of one another**

(a) Responsibilities between vessels, action of give way and stand on vessels
(b) Action to take to avoid collision by use of models for all cases including end on, crossing and overtaking
(c) Action to take when in a multiple vessel situation by use of models
(d) Describe the procedures for routine navigational and collision avoidance manoeuvres
(e) Describe actions when officer of the watch calls the Master when in an close quarters situation or in extremis

4 **Conduct of vessels not in sight of one another**

(a) Thorough knowledge of Rule 19
(b) Single and multiple vessel collision situations in restricted visibility

5 **Annexes to Collision Regulations an other items**

(a) Distress signals
(b) Describe the requirements for the organisation of bridge teams
(c) Explains the requirements and methods for passage planning
(d) Describe the contents of Masters standing orders and expectations from the officers of the watch
(e) Demonstrate a sound knowledge of the principles of keeping a navigational watch at sea and at anchor

TOPIC TWO: EXCEPTIONAL CIRCUMSTANCES AND HEAVY WEATHER

1 **Exceptional circumstances**

(a) Demonstrate the ability to act decisively in situations that put the vessel in possible or real peril such as loss of rudder and or propeller
(b) Explain the legal and practical actions after a collision or sustaining hull damage from any cause

(c) Explain the actions after grounding and methods of re-floating
(d) State reasons and methods of beaching a vessel
(e) Describe methods of handling a disabled vessel in seaway
(f) Explain the actions when experiencing loss of power in confined waters or on a lee shore
(g) Explain the actions when experiencing E/R emergencies such as crankcase explosions, generator failure, and fire
(h) Explain the actions required when cargo lashings come adrift
(i) Devise a contingency plan due top structural failure, leaking hatch covers, cracks to the deck and hull and flooding

2 **Preservation of passengers and crew**

(a) Describe the steps and procedure to be taken when a vessel is in distress as a result of grounding, collision, fire or foundering
(b) Describe the procedures to ensure survival following abandoning ship
(c) Describe recognised distress procedures when communicating with another station
(d) Explain the use of distress equipment rocket apparatus to facilitate contact between ship and shore
(e) Explain various methods for rescuing of passengers and crew by helicopter, other vessels and rocket apparatus

3 **Search and Rescue**

(a) Demonstrate knowledge of the IAMSAR
(b) Describe the methods for preparing boats, rafts and other equipment for the recovering of survivors
(c) Describe methods of rescuing survivors of casualties, manoeuvring of vessels close to casualty, launching a recovery of boats in a seaway and treatment of survivors
(d) Explain working with helicopters and fixed wing aircraft

4 **Oil pollution and other items**

(a) Describe actions and statutory obligations to be taken after accidental or deliberate pollution by oil or other noxious substances
(b) Describe actions to be taken when passengers or crew are injured at or in port
(c) Describe actions to take in case of navigational emergencies such as a chart does not correspond with marks in sight, poor visibility in heavy traffic and close waters
(d) Explain the Master=s statutory obligations responsibilities as a result of a marine casualty

5 **Heavy weather**

(a) Describe precautions in detail to be taken prior to the onset of heavy weather
(b) Describe how certain types of vessels will handle in heavy weather
(c) Describe the method for turning a vessel around in heavy seas
(d) Describe action to be taken when the vessel is pounding excessively and access control on the decks

TOPIC THREE: SHIP HANDLING, TOWAGE AND WATCHKEEPING

1 Manoeuvring

(a) Demonstrate with models the ability to manoeuvre in the open sea, approaching rivers and harbours, to an anchorage, to pick up a pilot, to a berth alongside a quay or jetty, to single buoy mooring and to leave from buoys and other SBM=s

(b) Demonstrate the use of anchors and cables both for manoeuvring a vessel and berthing a vessel with or without currents and wind

(c) Describe precautions before entering heavy weather, entering close waters and entering or leaving port

(d) Demonstrate with models the turning circles and manoeuvring data of ships

2 Towing and being towed

(a) Discuss the precautions to be taken en route and how to avoid chaffing

(b) Discuss the passage planning for a vessel being towed

3 IMO principles of navigation watchkeeping and port duties

(a) Demonstrate a sound knowledge of the principles of keeping a navigational watch at sea and at anchor including the following:

- $ watch arrangements especially in respect of lookouts
- $ fitness for duty
- $ navigational planning and position determination
- $ navigation equipment
- $ duties and responsibilities when taking over and keeping a watch
- $ recording events while on watch
- $ reporting of navigational hazards, derelicts and any event that could affect the safety of the vessel or other vessels

(b) Demonstrate a good understanding of the various duties of the OOW in port with respect to watchkeeping and cargo related matters

TOPIC FOUR: DRYDOCKING AND SAFEGUARDING OF CARGO

1 Drydocking

(a) State particulars to be provided to dockmaster and records of previous drydockings

(b) State the optimum conditions for drydocking

(c) State the precautions to be taken in drydock

(d) State the precautions to be taken before undocking

(e) State the precautions to be taken during undocking

2 Safeguarding of cargo

(a) Describe the Master=s responsibilities regarding the care of cargo

(b) Demonstrate knowledge of commercial cargo terms and functions of bills of lading, letters of protest and letters of indemnity

(c) Demonstrate the knowledge of P&I Clubs and the role they play to assist the owners

TOPIC FIVE: PREVENTION OF FIRE, PEST CONTROL, CREW RELATIONS

1 Prevention of fire

(a) Define terms such as flammable, non-flammable, toxic vapours, combustible, flash point, ignition temperature
(b) Explain the advantages and disadvantages of certain fire-fighting mediums
(c) Describe the crew organisation for fire fighting
(d) Discuss the tactical organisation and actions required in any fire situation
(e) Discuss the tactical organisation and actions required after any fire situation both from a legal and practical point of view
(f) Demonstrate knowledge of how and why all types of fire appliances should be tested and importance of drills
(g) Demonstrate knowledge of fire divisions.
(h) Demonstrate knowledge of fire precautions in port
(i) Explain the contents of the Masters standing orders in port especially with regard to fire patrols

2 Pest Control

(a) Describe methods of preventing infestation and fumigation especially with regard to safety precautions before and after fumigation

3 Personnel management, organisation and training

(a) Demonstrate an understanding of the crew welfare sections of the MSA
(b) Demonstrate an understanding of Contract of Employment and the legislation regarding engagement and discharge of crew
(c) Describe the seaman=s right to wages and employer=s duties to pay such wages
(d) Discuss the role of the Master as a manager in respect of planning, delegation and their authority and responsibilities.
(e) Demonstrate knowledge of the concept of modern management practices, motivation of crew, job satisfaction and good communication
(f) Demonstrate a good understanding of budgets and control of expenditure
(g) Resolve typical crew problems relating to articles, other transgressions, contract of employment and penalties under the MSA
(h) Describe the procedure for handling crew complaints
(i) Describe how to conduct a disciplinary hearing and entries in the OLB
(j) Describe and explain the entries to be made in the OLB
(k) Show knowledge of completing documents such as Discharge Books, Watch-keeping Certificates, Record Books, and Overtime
(l) Describe the role played by all the officers with respect to training of junior officers and ratings
(m) Describe fully the actions and checks when taking over command in different circumstances such as a new ship, second hand ship, sick Master

TOPIC SIX: COMPASSES AND REGULATIONS

1 Compasses

(a) Identify possible causes of unreliable or fluctuating compasses or large deviation for certain headings and practical steps to correct these
(b) Describe how and why to keep a compass in good order

2 **Regulations**

(a) Demonstrate a working knowledge of the LSA Regulations, Safety of Navigation Regulations, Loadline Regulations, ISM Regulations, ISPS Regulations, Radio Regulations, Chart and Nautical Publications Regulations
(b) Demonstrate knowledge of the obligations of the Master in terms of the Training and Certification Regulations with respect to training
(c) Safe Manning Regulations

3 **Safety Conventions and Acts**

(a) Demonstrate a working knowledge of the MSA relating to seaworthiness and detention how they affect the operation of the vessel
(b) Discuss the authority of a port state to hold periodic inspections of a vessel
(c) Demonstrate an understanding of circumstances leading to the detention of a vessel and the method by which it is detained
(d) Demonstrate a full knowledge of all statutory certification and validity thereof
(e) Demonstrate an understanding of procedures for inspections and surveys and maintenance of records of such inspections and surveys

ANNEX 3

MATE (COASTAL) ORAL ASSESSMENT SYLLABUS – VESSELS UNDER 500 GT

TOPIC ONE: COLLISION REGULATIONS

1 **General**

(a) Application of Rules, definitions, Rule 2(b)
(b) Look out and safe speed
(c) Risk of collision, scanty information and action taken to avoid a collision
(d) Narrow channels and Traffic Separation Schemes

2 **Lights, shapes, fog signals and additional signals**

(a) Lights, shapes and fog signals of all types of vessels. Models or cards shall be used for this part of the examination.
(b) Arc and range of visibility of lights for various lengths and types of vessels. Details of shapes

3 **Conduct of vessels in sights of one another**

(a) Responsibilities between vessels, action of give way and stand on vessels
(b) Action to take to avoid collision by use of models for all cases including end on, crossing and overtaking
(c) Action to take when in a multiple vessel situation by use of models
(d) Describe the procedures for routine navigational and collision avoidance manoeuvres

4 **Conduct of vessels not in sight of one another**

(a) Thorough knowledge of Rule 19
(b) Single and multiple vessel collision situations in restricted visibility

5 **Annexes to Collision Regulations**

(a) Distress signals
(b) Positioning of lights

TOPIC TWO: STOWAGE AND SECURING OF CARGO AND WATCHKEEPING

1 **Cargo Work**

(a) Understand and demonstrate the safe lashing arrangements for all types of cargoes both on deck and underdeck
(b) Understand the need to refer to the IMDG Code and any other references to the carriage of cargoes
(c) Understand the role of Administrations in controlling the carriage of dangerous cargoes
(d) Describe the problems in loading a vessel to it=s marks
(e) Understand the factors in cargo planning and loading rotation with regard to:- trim, local requirements stability, deck stress and point load
(f) Understand the reasons for safe access to the vessel from shore, other vessels and lighters

(g) Understand the various types of derricks and cranes and their operations especially by the crew
(h) Understands what cargoes are liable to spontaneous combustion
(i) Understands the need for crew and stevedore safety and appreciation of the Code of Safe Working Practice and the Maritime Occupational Safety Regulations
(j) Demonstrate the ability to plan and supervise the loading and discharging of cargoes including stability, deck loading and lashing
(k) Understanding of the Mates Receipt and the consequences of signing this
(l) Understand the testing and certification procedures of all cargo equipment including strops and all types of lifting gear

2 **IMO principles of navigation watchkeeping and port duties**

(a) Demonstrate a sound knowledge of the principles of keeping a navigational watch at sea and at anchor including the following:
- $ watch arrangements especially in respect of lookouts
- $ fitness for duty
- $ navigational planning and position determination
- $ navigation equipment
- $ duties and responsibilities when taking over and keeping a watch
- $ recording events while on watch
- $ reporting of navigational hazards, derelicts and any event that could affect the safety of the vessel or other vessels
- $ when to call the Master

(b) Demonstrate a good understanding of the various duties of the OOW in port with respect to watchkeeping and cargo related matters

TOPIC THREE: MAINTENANCE AND OPERATION OF ALL DECK APPLIANCES, ANCHORS AND CREW RELATIONS

1 **Deck appliances**

(a) Understand the operation of and demonstrate the use and care of winches, windlasses, capstans, fairleads, davits and emergency steering gear
(b) Describe the maintenance of derricks, cranes, and related equipment
(c) Describe the ordering and control of spares, stores and consumables for the maintenance of deck equipment and the vessel in general

2 **Anchors and anchoring**

(a) Demonstrate the correct care and maintenance of anchors and cables
(b) Describe a suitable method for freeing of an anchor jammed in the hawse pipe, spurling pipe or chain locker
(c) Describe precautions when working with chain and in the chain locker

3 **General**

(a) Understand the purpose of having and the use of plans, drawings and other data supplied to the vessel
(b) Describe the supplied data regarding a rigging plan, G.A. plans, displacement plan, and hydrostatic particulars
(c) Understand the organisation of the crew and their training for safe and efficient operations

(d) Understand the action to be taken when the crew are under the influence of alcohol or narcotics, malingering, sick, refuse to work or involved in other disputes
(e) Understand how to deal with crew who are considered to be incompetent
(f) Understand the complaints procedure and including rights of seaman and responsibilities of officers
(g) Understand the need for good hygiene of all individuals and areas
(h) Understand the need for crew safety at all times

TOPIC FOUR: DRYDOCKING

1 **Drydocking**

(a) Understand that a full and detailed list of repairs to be carried out while in dock is to be prepared for all interested parties
(b) Understand that the dockmaster should be informed of draft and trim, position of bilge keels, the rake of the stem, echo sounder position and other keel transmitting and receiving units, cargo distribution and stability of the vessel
(c) Understand that all hull protruding equipment are withdrawn into the hull
(d) Understand that all tank soundings are taken once the vessel is on the blocks and that soundings are to be taken before the vessel is refloated
(e) Describe the reasons that all derricks, cranes and anchors should be stowed
(f) Describe the safety precautions to be taken in drydock including fire patrols and precautions during hotwork
(g) Describe the methods of gas-freeing a tank or enclosed space and entry thereto
(h) Understand the need for plug control
(i) Give a full description of the duties of the Chief Officer especially with the organisation of the crew and supervision of the repair of the vessel
(j) Understand the need to control issuing of stores and paint
(k) Understand the need for provision of essential services such as fire fighting water, communications, safe access, garbage removal and substitutes for fixed fire systems

TOPIC FIVE: EXCEPTIONAL CIRCUMSTANCES AND HEAVY WEATHER

1 **Exceptional circumstances**

(a) Describe measures to be taken when following collisions, groundings, heavy weather damage and leaks
(b) Describe appropriate methods for dealing with all types of fire on board
(c) Demonstrate an ability to organise the different types of emergency parties
(d) Demonstrate an appreciation for realistic safety drill of all types, safety committees and record keeping
(e) Describe procedures for tomming and shoring, leak stopping, crack stopping, cement boxes and their use in emergencies
(f) Describe the care and maintenance of all LSA equipment and fixed installations
(g) Demonstrate a full understanding of different types of fires and the best methods to combat them whether at sea, in port or in drydock
(h) Demonstrate an understanding of spontaneous combustion
(i) Actions to take on the death of the Master

2 **Oil transfers**

(a) Describe methods to prevent spillage during oil transfers at any time
(b) Describe a working knowledge of local and international legislation
(c) Describe actions to be taken after an oil spill

3 **Heavy weather**

(a) Describe precautions in detail to be taken prior to the onset of heavy weather
(b) Describe how certain types of vessels will handle in heavy weather
(c) Describe the method for turning a vessel around in heavy seas
(d) Describe the need for inspections to be made after heavy weather and show an understanding where to look for cracks, and distortions
(e) Describe action to be taken when the vessel is pounding excessively and access control on the decks
(f) Describe actions to be taken when cargo breaks adrift on deck and under deck

TOPIC SIX: EXTERNAL EFFECTS WHILE MANOEUVRING AND REGULATIONS

1 **Manoeuvring**

(a) Demonstrate with models the interaction between vessels when passing in narrow waters
(b) Demonstrate with the use of models the effects of transverse thrust and other manoeuvring aids, thrusters and anchors
(c) Demonstrate with models the turning circles and manoeuvring data of ships

2 **Regulations and general**

(a) Demonstrate a working knowledge of Life Saving Regulations
(b) Demonstrate a working knowledge of Loadline Regulations and MARPOL
(c) Demonstrate a working knowledge of ISPS Code and ISM Code
(d) Understand what to check when taking over a vessel from another Chief Officer
(e) Understand what to check for when taking over a second hand ship from another owner

ANNEX 4

MASTER (COASTAL) ORAL ASSESSMENT SYLLABUS VESSELS UNDER 500 GT ON NEAR COASTAL VOYAGES

TOPIC ONE: COLLISION REGULATIONS

1 **General**

(a) Application of Rules, definitions, Rule 2(b)
(b) Look out and safe speed
(c) Risk of collision, scanty information and action taken to avoid a collision
(d) Narrow channels and Traffic Separation Schemes

2 **Lights, shapes, fog signals and additional signals**

(a) Lights, shapes and fog signals of all types of vessels. Models or cards shall be used for this part of the examination.
(b) Arc and range of visibility of lights for various lengths and types of vessels. Details of shapes

3 **Conduct of vessels in sights of one another**

(a) Responsibilities between vessels, action of give way and stand on vessels
(b) Action to take to avoid collision by use of models for all cases including end on, crossing and overtaking
(c) Action to take when in a multiple vessel situation by use of models
(d) Describe the procedures for routine navigational and collision avoidance manoeuvres
(e) Describe actions when officer of the watch calls the Master when in an close quarters situation or in extremis

4 **Conduct of vessels not in sight of one another**

(a) Thorough knowledge of Rule 19
(b) Single and multiple vessel collision situations in restricted visibility

5 **Annexes to Collision Regulations an other items**

(a) Distress signals
(b) Positioning of lights
(c) Describe the requirements for the organisation of bridge teams
(d) Explains the requirements and methods for passage planning
(e) Describe the contents of Masters standing orders and expectations from the officers of the watch

TOPIC TWO: EXCEPTIONAL CIRCUMSTANCES AND HEAVY WEATHER

1 **Exceptional circumstances**

(a) Demonstrate the ability to act decisively in situations that put the vessel in possible or real peril such as loss of rudder and or propeller
(b) Explain the legal and practical actions after a collision or sustaining hull damage from any cause
(c) Explain the actions after grounding and methods of re-floating

(d) State reasons and methods of beaching a vessel
(e) Describe methods of handling a disabled vessel in seaway
(f) Explain the actions when experiencing loss of power in confined waters or on a lee shore
(g) Explain the actions when experiencing E/R emergencies such as crankcase explosions, generator failure and fire
(h) Explain the actions when cargo lashing comes adrift
(i) Devise a contingency plan due top structural failure, leaking hatch covers, cracks to the deck and hull and flooding

2 **Preservation of passengers and crew**

(a) Describe the steps and procedure to be taken when a vessel is in distress as a result of grounding, collision, fire or foundering
(b) Describe the procedures to ensure survival following abandoning ship
(c) Describe recognised distress procedures when communicating with another station
(d) Explain the use of distress equipment rocket apparatus to facilitate contact between ship and shore
(e) Explain various methods for rescuing of passengers and crew by helicopter, other vessels and rocket apparatus

3 **Search and Rescue**

(a) Demonstrate knowledge of the IAMSAR manual
(b) Describe the methods for preparing boats, rafts and other equipment for the recovering of survivors
(c) Describe methods of rescuing survivors of casualties, manoeuvring of vessels close to a casualty, launching a recovery of boats in a seaway and treatment of survivors
(d) Explain working with helicopters and fixed wing aircraft

4 **Oil pollution and other items**

(a) Describe actions and statutory obligations to be taken after accidental or deliberate pollution by oil or other noxious substances
(b) Describe actions to be taken when passengers or crew are injured at sea or in port
(c) Describe actions to take in case of navigational emergencies such as a chart does not correspond with marks in sight, poor visibility in heavy traffic and close waters
(d) Explain the Master=s statutory obligations responsibilities as a result of a marine casualty

5 **Heavy weather**

(a) Describe precautions in detail to be taken prior to the onset of heavy weather
(b) Describe how certain types of vessels will handle in heavy weather
(c) Describe the method for turning a vessel around in heavy seas
(d) Describe action to be taken when the vessel is pounding excessively and access control on the decks

TOPIC THREE: SHIP HANDLING AND TOWAGE

1 Manoeuvring

(a) Demonstrate with models the ability to manoeuvre in the open sea, approaching rivers and harbours, to anchorage, to pick up a pilot, to a berth alongside a quay or jetty, to single buoy mooring and to leave from buoys and other SBM=s
(b) Demonstrate the use of anchors and cables both for manoeuvring a vessel and berthing a vessel with or without currents and wind
(c) Describe precautions before entering heavy weather, entering close waters and entering or leaving port
(d) Demonstrate with models the turning circles and manoeuvring data of ships

2 Towing and being towed

(a) Discuss the precautions to be taken en route and how to avoid chaffing
(b) Discuss the passage planning for a vessel being towed

TOPIC FOUR DRYDOCKING AND SAFEGUARDING OF CARGO

1 Drydocking

(a) State particulars to be provided to dockmaster and records of previous drydocking
(b) State the optimum conditions for drydocking
(c) State the precautions to be taken in drydock
(d) State the precautions to be taken before undocking
(e) State the precautions to be taken during undocking
(f) State the specific precautions to be taken when drydocking with a full or partial cargo

2 Safeguarding of cargo

(a) Describe the Master=s responsibilities regarding the care of cargo
(b) Demonstrate knowledge of commercial cargo terms and functions of bills of lading, letters of protest and letters of indemnity
(c) Demonstrate the knowledge of P&I Clubs and the role they play to assist the owners

TOPIC FIVE: PREVENTION OF FIRE, PEST CONTROL, PERSONNEL MANAGEMENT

1 Prevention of fire

(a) Define terms such as flammable, non-flammable, toxic vapours, combustible, flash point, ignition temperature
(b) Explain the advantages and disadvantages of certain fire-fighting mediums
(c) Describe the crew organisation for fire fighting
(d) Discuss the tactical organisation and actions required in any fire situation
(e) Discuss the tactical organisation and actions required after any fire situation both from a legal and practical point of view
(f) Demonstrate knowledge of how and why all types of fire appliances should be tested and importance of drills
(g) Demonstrate knowledge of fire precautions in port

(h) Explain the contents of the Masters standing orders in port especially with regard to fire patrols

2 **Pest Control**

(a) Describe methods of preventing infestation and fumigation especially with regard to safety precautions before and after fumigation

3 **Personnel management, organisation and training**

(a) Demonstrate an understanding of the crew welfare sections of the MSA
(b) Demonstrate an understanding of Contract of Employment and the legislation regarding engagement and discharge of crew
(c) Describe the seaman=s right to wages and employer=s duties to pay such wages
(d) Discuss the role of the Master as a manager in respect of planning, delegation and their authority and responsibilities.
(e) Demonstrate knowledge of the concept of modern management practices, motivation of crew, job satisfaction and good communication
(f) Demonstrate a good understanding of budgets and control of expenditure
(g) Resolve typical crew problems relating to articles, other transgressions, contract of employment and penalties under the MSA
(h) Describe the procedure for handling crew complaints
(i) Describe how to conduct a disciplinary hearing and entries in the OLB
(j) Describe and explain the entries to be made in the OLB
(k) Show knowledge of completing documents such as Discharge Books, Watch-keeping Certificates, Record Books, and Overtime
(l) Describe the role played by all the officers with respect to training of junior officers and ratings
(m) Describe fully the actions and checks when taking over command in different circumstances such as a new ship, second hand ship, sick Master

TOPIC SIX: COMPASSES, REGULATIONS AND SAFETY CONVENTIONS

1 **Compasses**

(a) Identify possible causes of unreliable or fluctuating compasses or large deviation for certain headings and practical steps to correct these
(b) Describe how and why to keep a compass in good order

2 **Regulations**

(a) Demonstrate a working knowledge of the LSA Regulations, Safety of Navigation Regulations, Loadline Regulations, ISM Regulations, ISPS Regulations, Radio Regulations, Chart and Nautical Publications Regulations
(b) Demonstrate knowledge of the obligations of the Master in terms of the Training and Certification Regulations with respect to training
(c) Demonstrate knowledge of the Safe Manning Regulations

3 **Safety Conventions**

(a) Demonstrate a working knowledge of the contents of the important safety conventions and the MSA relating to seaworthiness and detention how they affect the operation of the vessel
(b) Discuss the authority of a port state to hold periodic inspections of a vessel

(c) Demonstrate an understanding of circumstances leading to the detention of a vessel and the method by which it is detained

(d) Demonstrate a full knowledge of all statutory certification and validity thereof

(e) Demonstrate an understanding of procedures for inspections and surveys and maintenance of records of such inspections and surveys

ANNEX 5

STCW >95 DECK OFFICER ORAL ASSESSMENT SYLLABUS – OFFICER OF THE WATCH OF A VESSEL OF 500 GT OR MORE ON UNLIMITED VOYAGES

TOPIC ONE: COLLISION REGULATIONS

1 **General**

(a) Application of Rules, definitions, Rule 2(b)
(b) Look out and safe speed
(c) Risk of collision, scanty information and action taken to avoid a collision
(d) Narrow channels and Traffic Separation Schemes

2 **Lights, shapes, fog signals and additional signals**

(a) Lights, shapes and fog signals of all types of vessels. Models or cards shall be used for this part of the examination.
(b) Arc and range of visibility of lights for various lengths and types of vessels. Details of shapes

3 **Conduct of vessels in sights of one another**

(a) Responsibilities between vessels, action of give way and stand on vessels
(b) Action to take to avoid collision by use of models for all cases including end on, crossing and overtaking
(c) Action to take when in a multiple vessel situation by use of models
(d) Describe the procedures for routine navigational and collision avoidance manoeuvres

4 **Conduct of vessels not in sight of one another**

(a) Thorough knowledge of Rule 19
(b) Single and multiple vessel collision situations in restricted visibility

5 **Annexes to Collision Regulations**

(a) Distress signals
(b) Positioning of lights

TOPIC TWO: INSTRUMENTATION

1 **Understand and read the barometer, barograph, hygrometer, hydrometer**.

(a) Read the atmospheric pressure as indicated by an aneroid barometer, applying corrections as required.
(b) Understand the principle and function of a barograph
(c) Understand the term barometric tendency and able to estimate this from a barograph
(d) Understand the factors which will affect the accuracy of data provided by the wet and dry bulb hygrometer and hence able to state the factors to determine the best position for the instrument
(e) Use tables to determine relative humidity and dew point and the use thereof to predict fog
(f) Understand the principle of the hydrometer, the corrections of the readings and practical application thereof

2 **Gyro and magnetic compasses**

(a) Maintenance, the care of and use of an azimuth mirror
(b) Name the principal parts of the binnacle
(c) Eliminate bubbles within the bowl of a liquid compass
(d) Care of the magnetic compass, periscope and associated lenses
(e) Basic knowledge of correctors and importance of not disturbing them
(f) Application of gyro error to courses steered and bearing measured
(g) Understand the follow-up system to the gyro repeaters
(h) Understand the adjustments for latitude and speed and use of gyro in high latitudes
(i) Procedures for changing from auto pilot to hand steering and overriding of the auto-pilot
(j) Tendency of auto-pilot and analysis of the data recorded

3 **Electronic Navaids**

(a) Practical use of radar including ARPA, Echo Sounders, GPS systems, Logs, VDR=s, AIS=s, ECDIS, Manoeuvring Indicators, EPIRBS and SARTS.

4 **Sextant and Chronometers**

(a) Ascertain the chronometer error using an appropriate radio signal or other source of accurate time
(b) Care and proper record keeping of chronometer
(c) Correctly read a sextant both on and off the arc
(d) Detect and correct one or more of the errors and the order in which to do so
(e) Find the index error of a sextant using the sun and comparing this value to the tabulated SD to determine accuracy of the observation.
(f) Other methods of finding the Index error, horizon and stars
(g) Apply the error to the measured sextant altitude
(h) Knowledge of the reasons why a sextant altitude to any heavenly body is taken and how this can be used to obtain a position with one or more sights

TOPIC THREE: RIGGING OF SHIPS, STOWAGE AND SECURING OF CARGO

1 **Cargo Gear**

(a) Understand and interpret information from a rigging plan and understand the terminology
(b) Demonstrate familiarity of legislation appropriate to lifting equipment
(c) Logging and details of inspections and maintenance of lifting equipment
(d) Recognise when any equipment fitted with lifting equipment may be dangerous and know when to condemn a rope or other item of lifting equipment
(e) Describe getting a vessel ready for cargo work including the setting up of derricks, cranes and other lifting equipment
(f) Identify the checks to be made by the OOW on all equipment during a cargo watch and methods of loading/discharge used by stevedores and others

2 **Cargo stowage**

(a) Outline the method of stowing all types of general cargo
(b) Outline the methods of stowage of cargo in Ro-Ro vessels both unitised and break-bulk.
(c) Understand the hazards associated with Ro-Ro vessels with regard to cargo especially traffic dangers, fumes, securing, fuel in tanks, doors and ramp limitations

(d) Outline the method of loading/discharging heavy lifts and securing thereof.
(e) Outline the effects on the stability of the vessel both transversely and vertically when loading heavy lifts with ship=s derricks/cranes
(f) Outline method used in stowing containers and securing of containers

3 **Regulations**

(a) Demonstrate knowledge of regulations, recommendations, codes and so forth with respect to:
- $ Deck Cargoes
- $ Hazardous Cargoes
- $ Bulk cargoes including grain
- $ Securing cargoes on all types of vessels

(b) Demonstrate an ability to use the following publications:
- $ IMDG Code
- $ IBC Code
- $ MFAG Code
- $ Code of Safe Practice for Merchant Seaman

TOPIC FOUR: BRIDGE PRACTICE, WATCH-KEEPING AND SAFETY PROCEDURES

1 **Preparations for getting underway**

(a) Demonstrate knowledge of testing of bridge equipment including ensuring that all nautical publications are ready for the commencement of the voyage and obtaining latest weather forecast
(b) Knowledge of methods of securing of cargo below and on deck
(c) Knowledge of all cargo gear stowed correctly and secured including knowledge of operations and securing of such fittings
(d) Reasons why all water and weather tight doors are closed and secured especially on Ro-Ro vessels including knowledge of operations and securing of such fittings
(e) Reasons for stowaway search
(f) Demonstrate familiarity with the ICS Bridge Guide

2 **Duties of OOW prior to proceeding to sea and making a port**

(a) Understands that the first part of the voyage is properly planned before getting underway and demonstrate a knowledge of passage plan
(b) Understands the responsibilities and duties of a OOW while a pilot is on board
(c) Understand the need to monitor all bridge equipment soon after getting underway and the need to monitor the vessels position frequently
(d) Demonstrate a knowledge of navigation marks, buoyage and traffic near a port entrance
(e) Understand the duties of a OOW when approaching a port including compliance with the Master=s instructions in respect of:
- $ engine room notice
- $ advising ETA=s to Port Authorities
- $ giving the crew sufficient notice to make the vessel ready for arrival
- $ making the pilot ladder ready
- $ ensuring that weather is sufficiently calm for crew to work on deck
- $ understand the requirement to test equipment prior to arrival especially with regard to steering gear and communication systems
- $ taking charge of working parties forward and aft

- $ full knowledge of anchoring or heaving an anchor and safety measures to adopt

3 **IMO principles of navigation watchkeeping and port duties**

(a) Demonstrate a sound knowledge of the principles of keeping a navigational watch at sea and at anchor including the following:
- $ watch arrangements especially in respect of lookouts
- $ fitness for duty
- $ navigational planning and position determination
- $ navigation equipment
- $ duties and responsibilities when taking over and keeping a watch
- $ recording events while on watch
- $ reporting of navigational hazards, derelicts and any event that could affect the safety of the vessel or other vessels
- $ when to call the Master

(b) Demonstrate a good understanding of the various duties of the OOW in port with respect to watchkeeping and cargo related matters

4 **Understand the duties of the OOW prior to entering and in drydock**

(a) demonstrate a knowledge of special safety measures which must be taken while in drydock
(b) describe the importance of coupling a shore fire line to the ships fire main and a knowledge of the International Shore Connection
(c) describe taking over a watch in drydock and entries in the logbook

TOPIC FIVE: CONNING AND MANOEUVRING A VESSEL INCLUDING EMERGENCY MANOEUVRE PROCEDURES

1 **Helm orders and conning the ship**

(a) demonstrate a knowledge of common helm orders and procedures in giving and acknowledging helm orders and correct any steering errors including chasing the compass
(b) understand the effects of wind and current on the conning of the vessel
(c) understand the terms Atransfer@ and Aadvance@ and is familiar with turning circles
(d) understand bank cushion and suction effects and the interaction between ships passing at close range and know the helm orders to counteract these effects
(e) understand the effects of passing close to shallows on one side of the vessel

2 **Effects of propellers on the steering of the vessel**

(a) Effects of transverse thrust
(b) The effect of Kort nozzles

3 **Emergency Manoeuvres**

(a) Describe fully the procedures to adopt in respect of a man overboard
(b) Thorough understanding of the procedure to adopt should a grounded vessel be unexpectedly be sighted ahead
(c) Thorough understanding of the procedure to adopt should a vessel drag anchor
(d) Thorough understanding of the procedure to adopt when a vessel is being blown onto a lee shore

(e) Thorough understanding of the procedure to adopt and initial action to be taken in the event of a fire on deck in order to reduce relative deck wind and/or to keep the deck clean of toxic vapours
(f) Thorough understanding of the procedure to adopt when a landmark or other navigational sighting is overdue or not sighted or if the vessel is well away from the intended track
(g) Describe the procedures for putting engines on immediate standby in cases of deteriorating weather

4 **Drills, musters and emergency parties**

(a) Describe the frequency and reasons for holding emergency drills and musters and procedures carried out at such drills including fire, collision, abandon ship and oil spills
(b) Describe the various emergency signals of bells and whistles
(c) Describe the ability to draw up well balanced emergency parties and the duties of each especially with regard to fire or flood situations
(d) Describe the content of muster bills, safety plans and their location and the various safety related information/instructional posters on the vessel
(e) Demonstrate knowledge of taking control of an emergency party
(f) Demonstrate knowledge of emergency fire pumps
(g) Demonstrate knowledge of the reasons to close flaps, vents and other openings as well as means of stopping fans remotely and locally
(h) Reasons for fitting of a forepeak valve

TOPIC SIX: USE AND CARE OF LIFESAVING AND FIRE APPLIANCES, SEARCH AND RESCUE AND LIFEBOAT AND SAFETY PRACTICES

(a) Understanding of operations of a line throwing apparatus and method of passing messengers to casualties where flammable vapour is present
(b) Describe fully the use care and care of all lifesaving appliances including liferafts, boats and their associated equipment, lifebuoys, lifejackets, pyrotechnics, MOBS, SARTS, EPIRBS, EEBD=s, aldis lamps, portable radios and stretchers
(c) Describe fully the use care and care of all fire fighting appliances including hydrants, hoses, nozzles, foam nozzles and foam making compounds, portable and fixed fire fighting installations, B.A.=s, safety lamps, container fire fighting equipment and asbestos blankets
(d) An understanding of the MERSAR manual
(e) Enclosed space entry and actions to take in cases of emergency
(f) Safety in general for all types of operations on board vessels including knowledge of MARPOL and the ISPS Code
(g) Outline the requirements for training and safe operations with crew and trainees

ANNEX 6

STCW >95 CHIEF MATE ORAL ASSESSMENT SYLLABUS-CHIEF MATE OF VESSEL OF GT OR MORE OR 3000 GT OR MORE ON UNLIMITED VOYAGES

TOPIC ONE: COLLISION REGULATIONS

1 **General**

(a) Application of Rules, definitions, Rule 2(b)
(b) Look out and safe speed
(c) Risk of collision, scanty information and action taken to avoid a collision
(d) Narrow channels and Traffic Separation Schemes

2 **Lights, shapes, fog signals and additional signals**

(a) Lights, shapes and fog signals of all types of vessels. Models or cards shall be used for this part of the examination.
(b) Arc and range of visibility of lights for various lengths and types of vessels. Details of shapes

3 **Conduct of vessels in sights of one another**

(a) Responsibilities between vessels, action of give way and stand on vessels
(b) Action to take to avoid collision by use of models for all cases including end on, crossing and overtaking
(c) Action to take when in a multiple vessel situation by use of models
(d) Describe the procedures for routine navigational and collision avoidance manoeuvres

4 **Conduct of vessels not in sight of one another**

(a) Thorough knowledge of Rule 19
(b) Single and multiple vessel collision situations in restricted visibility

5 **Annexes to Collision Regulations**

(a) Distress signals
(b) Positioning of lights

TOPIC TWO: HEAVY LIFTS, STOWAGE AND SECURING OF CARGO

1 **Cargo Work**

(a) Understand the special stowage requirements for the following:- hazardous cargoes, timber deck cargoes, homogenous cargoes that can liquify on passage
(b) Understand and demonstrate the safe lashing arrangements for all types of cargoes both on deck and underdeck
(c) Understand the need to refer to the IMDG Code, Grain Rules, IBC Code, Timber Deck Cargoes and any other references to the carriage of cargoes
(d) Understand the role of Administrations in controlling the carriage of dangerous cargoes and advice from P&I Clubs in respect of Adifficult@ cargoes
(e) Describe the problems loading a vessel to it=s marks, procedures and problems with bulk cargoes

(f) Understand the factors in cargo planning and loading rotation with regard to:
- shear force and bending moments,
- trim, air draft,
- local requirements,
- deck stress and
- point load

(g) Understand how to deal with stevedores, agents and surveyors with respect to cargo operations

(h) Understand the reasons for safe access to the vessel from shore, other vessels and lighters

(i) Understand the various types of derricks and cranes and the operations thereof especially by the crew

(j) Understand the hazards of Ro-Ro vessels with respect to ventilation, lashing, stability, free water on deck and ramp limitations

(k) Understands what cargoes are liable to spontaneous combustion

(l) Understands the need for crew and stevedore safety and appreciation of the Code of Safe Working Practice and the Maritime Occupational Safety Regulations

(m) Demonstrate the ability to plan and supervise the loading and discharging of heavy cargoes including stability, deck loading and lashing

(n) Understanding of the Mates Receipt and the consequences of signing this

(o) Understand the testing and certification procedures of all cargo equipment including strops and all types of lifting gear

TOPIC THREE: MAINTENANCE AND OPERATION OF ALL DECK APPLIANCES, ANCHORS AND CREW RELATIONS

1 **Deck appliances**

(a) Understand the operation of and demonstrate the use and care of winches, windlasses, capstans, fairleads, davits and emergency steering gear

(b) Describe the role played by planned maintenance

(c) Describe the maintenance requirements of derricks, cranes, gantries, ramps and related equipment

(d) Describe the ordering and control of spares, stores and consumables for the maintenance of deck equipment and the vessel in general

2 **Anchors and anchoring**

(a) Demonstrate the correct care and maintenance of anchors and cables

(b) Describe the operation for anchoring in any wind and tide including the use of a second anchor

(c) Clearing a foul hawse and a foul anchor

(d) Describe the method of hanging off an anchor and securing the vessel to a mooring buoy using the anchor chain

(e) Understand the methods and organization of changing lost or damaged anchors and the equipment required

(f) Describe a suitable method for freeing of an anchor jammed in the hawse pipe, spurling pipe or chain locker

(g) Describe precautions when working with chain and in the chain locker

(h) Describe the requirements for inspecting anchors and chain and markings

3 **General**

(a) Understand the purpose of having and the use of plans, drawings and other data supplied to the vessel

(b) Describe the supplied data regarding a rigging plan, G.A. plans, displacement plan, and hydrostatic particulars
(c) Understand the organisation of the crew and their training for safe and efficient operations
(d) Understand the action to be taken when the crew under the influence of alcohol or narcotics, malingering, sick, refuse to work or are involved in other disputes
(e) Understand how to deal with crew who are considered to be incompetent
(f) Understand the complaints procedure and including rights of seaman and responsibilities of officers
(g) Demonstrate a full knowledge of the cadet training schemes
(h) Understand the need for good hygiene of all individuals and areas
(i) Understand the need for crew safety at all times

TOPIC FOUR: DRYDOCKING

1 **Drydocking**

(a) Understand that a full and detailed list of repairs to be carried out while in dock is to be prepared for all interested parties
(b) Understand that the dockmaster should be informed of draft and trim, position of bilge keels, the rake of the stem, echo sounder position and other keel transmitting and receiving units, cargo distribution and stability of the vessel
(c) Understand that all hull protruding equipment are withdrawn into the hull
(d) Understand that all tank soundings are taken once the vessel is on the blocks and that soundings are to be taken before the vessel is refloated
(e) Describe the reasons that all derricks, cranes and anchors should be stowed
(f) Describe the safety precautions to be taken in drydock including fire patrols and precautions during hotwork
(g) Describe the methods of gas-freeing a tank or enclosed space and entry thereto
(h) Understand the need for plug control
(i) Give a full description of the duties of the Chief Officer especially with the organisation of the crew and supervision of the repair of the vessel
(j) Understand the need to control issuing of stores and paint
(k) Understand the need for provision of essential services such as fire fighting water, communications, safe access, garbage removal and substitutes for fixed fire systems

TOPIC FIVE: EXCEPTIONAL CIRCUMSTANCES AND HEAVY WEATHER

1 **Exceptional circumstances**

(a) Describe measures to be taken when following collisions, groundings, heavy weather damage and leaks
(b) Describe appropriate methods for dealing all types of fire on board
(c) Demonstrate an ability to organise the different types of emergency parties
(d) Demonstrate an appreciation for realistic safety drill of all types, safety committees and record keeping
(e) Describe procedures for tomming and shoring, leak stopping, crack stopping, cement boxes and their use in emergencies
(f) Describe the care and maintenance of all LSA equipment and fixed installations
(g) Demonstrate a full understanding of different types of fires and the best methods to combat them whether at sea, in port or in drydock
(h) Demonstrate a full understanding of spontaneous combustion

(i) Actions to take on the death of the Master

2 **Search and Rescue**

(a) Demonstrate knowledge of the contents of the IMO MERSAR manual
(b) Describe the methods for preparing boats, rafts and other equipment for the recovering of survivors
(c) Describe launching, handling and recovery of ship=s boats at sea
(d) Explain actions as OOW and assistance of the Master during a search
(e) Understand the need for good and concise record keeping during a search

3 **Oil transfers**

(a) Describe methods to prevent spillage during oil transfers at any time
(b) Describe a working knowledge of local and international legislation
(c) Describe actions to be taken after an oil spill

4 **Heavy weather**

(a) Describe precautions in detail to be taken prior to the onset of heavy weather
(b) Describe how certain types of vessels will handle in heavy weather
(c) Describe the method for turning a vessel around in heavy seas
(d) Describe the need for inspections to be made after heavy weather and show an understanding where to look for cracks, distortions and so forth
(e) Describe action to be taken when the vessel is pounding excessively and access control on the decks
(f) Describe actions to be taken when cargo breaks adrift on deck and under deck

TOPIC SIX: EXTERNAL AFFECTS WHILE MANOEUVRING AND REGULATIONS

1 **Manoeuvring**

(a) Demonstrate with models the effects of current, wind shallows and draft while manoeuvring in rivers, canals and harbours
(b) Demonstrate with models the interaction between vessels when passing in narrow waters
(c) Demonstrate with models the advantages of tug assistance
(d) Demonstrate the berthing/unberthing of vessels alongside a quay or terminal with or without the assistance of tugs
(e) Demonstrate with the use of models the effects of transverse thrust and other manoeuvring aids, thrusters and anchors
(f) Describe the effects of wind on high sided vessels
(g) Demonstrate with models the turning circles and manoeuvring data of ships

2 **Regulations and general**

(a) Demonstrate a working knowledge of SOLAS
(b) Demonstrate a working knowledge of Loadline Regulations and MARPOL
(c) Demonstrate a working knowledge of ISPS Code and ISM Code
(d) Understand what to check when taking over a vessel from another Chief Officer
(e) Understand what to check for when taking over a second hand ship from another owner

ANNEX 7

STCW >95 MASTER ORAL ASSESSMENT SYLLABUS – MASTER OF A SHIP OF 500 GT OR MORE OR 3000 GT OR MORE ON UNLIMITED VOYAGES

TOPIC ONE: COLLISION REGULATIONS

1 **General**

(a) Application of Rules, definitions, Rule 2(b)
(b) Look out and safe speed
(c) Risk of collision, scanty information and action taken to avoid a collision
(d) Narrow channels and Traffic Separation Schemes

2 **Lights, shapes, fog signals and additional signals**

(a) Lights, shapes and fog signals of all types of vessels. Models or cards shall be used for this part of the examination.
(b) Arc and range of visibility of lights for various lengths and types of vessels. Details of shapes

3 **Conduct of vessels in sights of one another**

(a) Responsibilities between vessels, action of give way and stand on vessels
(b) Action to take to avoid collision by use of models for all cases including end on, crossing and overtaking
(c) Action to take when in a multiple vessel situation by use of models
(d) Describe the procedures for routine navigational and collision avoidance manoeuvres
(e) Describe actions when officer of the watch calls the Master when in an close quarters situation or in extremis

4 **Conduct of vessels not in sight of one another**

(a) Thorough knowledge of Rule 19
(b) Single and multiple vessel collision situations in restricted visibility

5 **Annexes to Collision Regulations an other items**

(a) Distress signals
(b) Positioning of lights
(c) Describe the requirements for the organisation of bridge teams
(d) Explains the requirements and methods for passage planning
(e) Describe the contents of Masters standing orders and expectations from the officers of the watch

TOPIC TWO: EXCEPTIONAL CIRCUMSTANCES AND HEAVY WEATHER

1 **Exceptional circumstances**

(a) Demonstrate the ability to act decisively in situations that put the vessel in possible or real peril such as loss of rudder and or propeller
(b) Explain the legal and practical actions after a collision or sustaining hull damage from any cause
(c) Explain the actions after grounding and methods of re-floating

(d) State reasons and methods of beaching a vessel
(e) Describe methods of handling a disabled vessel in seaway
(f) Explain the actions when experiencing loss of power in confined waters or on a lee shore
(g) Explain the actions when experiencing E/R emergencies such as crankcase explosions, generator failure and fire
(h) Explain the actions when cargo lashings comes adrift
(i) Devise a contingency plan due top structural failure, leaking hatch covers, cracks to the deck and hull and flooding

2 **Preservation of passengers and crew**

(a) Describe the steps and procedure to be taken when a vessel is in distress as a result of grounding, collision, fire or foundering
(b) Describe the procedures to ensure survival following abandoning ship
(c) Describe recognised distress procedures when communicating with another station
(d) Explain the use of distress equipment rocket apparatus to facilitate contact between ship and shore
(e) Explain various methods for rescuing of passengers and crew by helicopter, other vessels and rocket apparatus

3 **Search and Rescue**

(a) Demonstrate an in depth knowledge of the IMO MERSAR manual including search patterns and roles of OSC and shore stations
(b) Describe the methods for preparing boats, rafts and other equipment for the recovering of survivors
(c) Describe methods of rescuing survivors of casualties, manoeuvring of vessels close to casualty, launching a recovery of boats in a seaway and treatment of survivors
(d) Explain working with helicopters and fixed wing aircraft

4 **Oil pollution and other items**

(a) Describe actions and statutory obligations to be taken after accidental or deliberate pollution by oil or other noxious substances
(b) Describe actions to be taken when passengers or crew are injured at or in port
(c) Describe actions to take in case of navigational emergencies such as chart does not correspond with marks in sight, poor visibility in heavy traffic and close waters
(d) Explain the Master=s statutory obligations responsibilities as a result of a marine casualty

5 **Heavy weather**

(a) Describe precautions in detail to be taken prior to the onset of heavy weather
(b) Describe how certain types of vessels will handle in heavy weather
(c) Describe the method for turning a vessel around in heavy seas
(d) Describe action to be taken when the vessel is pounding excessively and access control on the decks

TOPIC THREE: SHIP HANDLING, TOWAGE AND NAVIGATION NEAR ICE

1 Manoeuvring

(a) Demonstrate with models the ability to manoeuvre in the open sea, approaching rivers and harbours, to anchorage, to pick up a pilot, to a berth alongside a quay or jetty, to single buoy mooring and to leave from buoys and other SBM=s
(b) Demonstrate the use of anchors and cables both for manoeuvring a vessel and berthing a vessel with or without currents and wind
(c) Describe various manoeuvres such as running and standing moors, Mediterranean moor
(d) Describe precautions before entering heavy weather, entering close waters and entering or leaving port
(e) Describe the routeing and handling of a vessel in the vicinity of a TSS
(f) Demonstrate with models the turning circles and manoeuvring data of ships

2 Towing and being towed

(a) Explain the legal implications and contractual obligations with reference to the parties involved and the term LOF
(b) Demonstrate an understanding how remuneration is granted
(c) Demonstrate an understanding of selection of an appropriate towing vessel
(d) Explain methods by which tows can be connected with and without power
(e) Discuss the precautions to be taken en route and how to avoid chaffing
(f) Discuss the passage planning for a vessel being towed

3 Navigation in the vicinity of ice

(a) State the areas where ice which is dangerous to navigation may be encountered and where ice accretion may be experienced
(b) State the sources from which information can be attained about such ice in (a)
(c) State the precautions when navigating in areas of ice especially at night and in restricted visibility
(d) Describe damage than can be sustained in areas of ice

TOPIC FOUR: DRYDOCKING, PORT OF REFUGE AND SAFEGUARDING OF CARGO

1 Drydocking

(a) State particulars to be provided to dockmaster and records of previous drydocking
(b) State the optimum conditions for drydocking
(c) State the precautions to be taken in drydock
(d) State the precautions to be taken before undocking
(e) State the precautions to be taken during undocking
(f) State the specific precautions to be taken when drydocking with a full or partial cargo

2 Port of refuge

(a) Discuss the choice to be made when selecting a port of refuge
(b) Show an understanding of the legal and other implications of entering a port of refuge
(c) Describe the procedure for entering a port of refuge
(d) State the following when entering a port of refuge; who should be informed, the manner of which costs/claims are met following a deviation

(e) Discuss the roles of various surveyors attending on board the vessel and know the rights and duties of each.

3 **Safeguarding of cargo**

(a) Describe the Master=s responsibilities regarding the care of cargo
(b) Describe the legal implications if cargo is shortlanded or transhipped
(c) Describe the hazards to cargo, ship and personnel when discharging cargo in drydock
(d) Demonstrate an in depth knowledge of refrigerated cargoes, volatile cargoes and other dangerous or susceptible cargoes
(e) Demonstrate knowledge of commercial cargo terms and functions of bills of lading, letters of protest and letters of indemnity
(f) Demonstrate the knowledge of P&I Clubs and the role they play to assist the owners

TOPIC FIVE : PREVENTION OF FIRE, PEST CONTROL, PERSONNEL MANAGEMENT

1 **Prevention of fire**

(a) Define terms such as flammable, non-flammable, toxic vapours, combustible, flash point, ignition temperature
(b) Explain the advantages and disadvantages of certain fire-fighting mediums
(c) Describe the crew organisation for fire fighting
(d) Discuss the tactical organisation and actions required in any fire situation
(e) Discuss the tactical organisation and actions required after any fire situation both from a legal and practical point of view
(f) Demonstrate an in depth knowledge of how and why all types of fire appliances should be tested and importance of drills
(g) Demonstrate an in depth knowledge of the IMDG Code, IBC Code, carriage of coal
(h) Demonstrate knowledge of fire divisions in terms of SOLAS
(i) Demonstrate knowledge of fire precautions in port
(j) Explain the contents of the Masters standing orders in port especially with regard to fire patrols

2 **Pest Control**

(a) State the purpose of the de-rat certificate and period of validity
(b) State the need for a beetle certificate especially when carrying grain
(c) Describe methods of preventing infestation and fumigation especially with regard to safety precautions before and after fumigation

3 **Personnel management, organisation and training**

(a) Demonstrate knowledge of STCW Convention and ICF/ISF Code of good management practice
(b) Demonstrate an understanding of the crew welfare sections of the MSA
(c) Demonstrate an understanding of Contract of Employment and the legislation regarding engagement and discharge of crew
(d) Describe the seaman=s right to wages and employer=s duties to pay such wages
(e) Discuss the role of the Master as a manager in respect of planning, delegation and their authority and responsibilities.
(f) Demonstrate knowledge of the concept of modern management practices, motivation of crew, job satisfaction and good communication
(g) Demonstrate a good understanding of budgets and control of expenditure

(h) Resolve typical crew problems relating to articles, other transgressions, contract of employment and penalties under the MSA
(i) Describe procedure for handling crew complaints
(j) Describe how to conduct a disciplinary hearing and entries in the OLB
(k) Describe and explain the entries to be made in the OLB
(l) Show knowledge of completing documents such as Discharge Books, Watch-keeping Certificates, Record Books, and Overtime
(m) Describe the role played by all the officers with respect to training of junior officers and
(n) Describe fully the actions and checks when taking over command in different circumstances such as a new ship, second hand ship, sick Master

TOPIC SIX: COMPASSES, REGULATIONS AND SAFETY CONVENTIONS

1 Compasses

(a) Describe the analysis method of correcting a compass
(b) Describe the tentative method of correcting a compass
(c) Describe the behaviour of the compass when passing from one hemisphere to another
(d) Identify possible causes of unreliable or fluctuating compasses or large deviation for certain headings and practical steps to correct these
(e) Describe how and why to keep a compass in good order
(f) Discuss the effects of external influences on the compass
(g) Identify specific regulations as to the siting, construction and number of compasses
(h) Understand the content and method of drawing up a deviation card and a compass deviation book

2 Regulations

(a) Demonstrate a working knowledge of the LSA Regulations, Safety of Navigation Regulations, Loadline Regulations, ISM Regulations, ISPS Regulations, Radio Regulations, Chart and Nautical Publications
(b) Show knowledge of the obligations of the Master in terms of the Training and Certification Regulations with respect to training
(c) Safe Manning Regulations

3 Safety Conventions

(a) Demonstrate a working knowledge of the contents of the important safety conventions and the MSA relating to seaworthiness and detention how they affect the operation of the vessel
(b) State the legal obligations of signatory states to conventions
(c) Discuss the authority of a port state to hold periodic inspections of a vessel
(d) Demonstrate an understanding of circumstances leading to the detention of a vessel and the method by which it is detained
(e) Demonstrate a full knowledge of all statutory certification and validity thereof
(f) Demonstrate an understanding of procedures for inspections and surveys andmaintenance of records of such inspections and surveys