

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Plan a voyage & conduct nav.	Voyage planning & nav.	<ol style="list-style-type: none"> 1) Assemble currently corrected charts for a specific route 2) Assemble info from all pertinent pubs – i.e. sailing directions , coast pilot, radio nav. Warnings light lists and ships routing for the specific route 3) Determine weather applicable to route <ol style="list-style-type: none"> a) tides, currents b) ice c) meteorological conditions (i.e. monsoon season , hurricanes) 4) Determine all hazards to nav. within prescribed route <ol style="list-style-type: none"> a) restricted areas b) traffic separation schemes 5) Plot track lines on charts taking into account above info 6) List any specific notification to be give when entering coastal waters (to a specific gov. or gov. entity). 	In-service experience or a Written Test (90%)			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Determine position and the accuracy of resultant position fix by any means	Position determined by celestial means Position determined by terrestrial means Position Determined by electronic nav. aids.	<p>1) Measure altitude of the sun morning or afternoon & at LAN' (meridian passage). Advance at least 3 lines of position to a common time for a running fix.</p> <p>2) Measure the altitude of at least 3 stars within a single twilight period & reduce them to lines of position and advance these to a running fix.</p> <p>1) Plot a position by visual bearing and range from radar.</p> <p>2) Plot a position by crossing at least 2 visual bearings.</p> <p>3) Plot a position by crossing at least 2 ranges off of radar.</p> <p>4) Plot a position by crossing 2 RDF bearings.</p> <p>Know the operating principles, limitations of, sources of error, and corrections to be applied for.</p> <p>1) Decca / Loran 2) Radar / Arpa 3) Satellite nav. systems , incl. GPS</p>	<p>Running fix position is within +/- 5 miles of actual position.</p> <p>-</p> <p>-</p> <p>-</p> <p>-</p> <p>Accuracy of the position should be within 10% of the distance to the nearest charted object used.</p> <p>Crossing bearings should be at least 20 degrees and no more than 160 degrees.</p> <p>-</p> <p>-</p> <p>Written exam 70%.</p>			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Determine and allow for compass error.	Understand compass error. - - - - - - Know the parts of the magnetic compass - Understanding of various means to determine compass error	Demonstrate knowledge between true north and magnetic north. Explain why determination of compass error is important for the safe navigation of a vessel. Explain the component of compass error (deviation and variation) and how they are applied. Explain what would cause a vessel's deviation to change. Explain how the various parts of the compass affect the compass deviation. Explain why a vessel would need to have a compass adjuster to swing the vessel. Identify methods of determining compass errors at sea and in port. Demonstrate ability to determine compass error at sea and in port.	Achieve a minimum of 70% on an exam.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
		Identify what compass information is available on a navigation chart and how it is applied. Identify the basis components of compass error.				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Coordinate search and rescue operation .	Understand and apply the procedures contained in the IMO Merchant Ship Search and Rescue Manual (MERSAR)	Knowledge of : 1)Co-ordination of search & rescue operation requirements. a) land-based b) on-scene 2)Actions of a ship in distress a) Transmission of the distress message. - b) components of the distress message. - c) direction –finding signals - d) cancellation of the distress message - 3) Action of assisting ships - a)on-board preparation - b)message to be sent to the vessel in distress - 4)Aircraft assistance 5)Planning & conducting a search - a) types of search patterns - b) factors determining the most probable area for the search - c) co-ordination of other vessels in search pattern - d) communication methods and message texts to be used in search patterns - 6)conclusion of the search - a)rescue procedures for survivors - b)factors determining terminating an unsuccessful search -	Written exam passing at 70%			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
		7) Communications a) marine radio communication - facilities available for distress - purposes 8) Aircraft casualties at sea				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Establish watch keeping arrangements and procedures	Thorough knowledge of content application and intent of the international regulations for preventing collisions at sea through knowledge of the content, application and intent of the principles to be observed in keeping a navigational watch.	Pass a written exam on content application and intent of the regulations - OR Identify vessels in restricted visibility by the hearing of audible sound signals. Determine risk of collision and steering & sailing rules situations of other vessels by observation of the aspect, bearing and sound signal, and maneuver the vessel to effect safe passage in accordance with all steering and sailing rules situations within the international regulations for preventing collisions at sea.	Passing of the exam at a minimum of 90% On simulator identify 18 out of 20 vessels that have different light and shape configuration. On simulator identify 9 out of 10 vessels with different sound signals On simulator identify 18 out of 20 different types of situations and provide a solution that maintains a safe distance from all vessels.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	Effective bridge teamwork procedures	Bridge resource management principles are used: 1) ensure that the proper equipment necessary to perform assigned tasks is available . 2) communicate with the members of the navigational watch in a clear immediate reliable and relevant manner. 3) Avoid nonessential activity and distractions 4) Ensure that all bridge equipment is operating properly and when it is not take into account any malfunction that exists when making operational decisions 5) Collect, process an interpret essential information that will be made available to pertinent personnel 6) Take into account the limitations of the personnel involved when assigning duties and assign them to proper locations so they can effectively perform their duties.	Passing assessment obtained from an approved Bridge Team Management Course.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Maintain safe navigation through the use of radar & ARPA & modern navigation systems to assist command decision-making	Knowledge of system errors & the fundamentals of radar & ARPA	<p>Ability to operate & interpret & analyze information obtained from <u>radar</u> including:</p> <ol style="list-style-type: none"> 1) factors affecting performance & accuracy 2) setting up & maintaining displays 3) Detection of misrepresentation of information, false echoes, sea return, racons, etc. <p>The use of <u>radars</u> & <u>ARPA</u> including:</p> <ol style="list-style-type: none"> 1) range & bearing, course & speed of other ships, time & distance of closest approach of crossing, meeting & overtaking vessels. 2) identification of critical echoes, detecting course & speed changes of other ships, effect of changes in own ships course or speed or both 3) applications of the international regulations for preventing collisions at sea 4) plotting techniques & relative and true motion concepts 5) parallel indexing 	Assessment obtained from an approved radar simulator course & ARPA simulator course.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
		Principle types of <u>ARPA</u> , their display characteristics, performance standards & the dangers of over reliance on ARPA Ability to operate & to interpret & analyze information obtained from ARPA, including 1) system performance & accuracy tracking capabilities & limitations & processing delays 2) use of operational warnings and system tests 3) methods of target acquisition & their limitations 4) true and relative vectors, graphic representation of target information & danger areas 5) deriving & analyzing information, critical echoes, exclusion areas & trial maneuvers				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Forecast weather & oceanographic conditions	<p>Ability to understand and interpret a synoptic chart & to forecast area weather taking into account local weather conditions an information received by weather fax.</p> <p>Knowledge of the characteristics of various weather systems including tropical revolving storms avoidance of storm centers & the dangerous quadrants.</p> <p>Knowledge of ocean current systems.</p> <p>Ability to calculate tidal conditions</p>	<p>Be able to analyze a synoptic chart and weather fax. Interpret change of instrument readings, i.e. anemometer & barometer.</p> <p>Understand the weather associated with: 1) Frontal systems, high or low or occluded. 2)tropical cyclones or hurricanes - - a)locating the storm center and - - maneuvering to avoid it. - b)dangerous & navigable - quadrants or semicircles</p> <p>Understand the different ocean current systems, the areas affected by them and the effects to be found within these areas.</p> <p>Understand tidal classifications tidal reference planes or datums and factors affecting tidal conditions. Be able to calculate 1)height of tide 2)time of tide, low or high</p>	Written exam 70% or inservice experience on ISO 9000/ ISM certified vessel where audits certify compliance.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	Use all appropriate navigational publications on tides and currents.	Understand the different types of tidal currents, i.e. rotary, reversing and temporary wind-driven, & hydraulic Be able to calculate: 1) time of slack water & max current 2) strength of current at any time. Be able to use: 1) tide tables 2) tidal current tables 3) tidal current charts 4) tidal current diagrams 5) pilot chart/plot chart atlases 6) radio navigation aids				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Responding to navigational emergencies.	<p>Precautions when beaching a ship.</p> <p>Action to be taken if grounding is imminent an after grounding.</p> <p>Refloating a grounded ship with and without assistance.</p>	<p>Determine type of bottom, alert engine room organize crew and determine effect of tide and current on vessel.</p> <p>Close watertight doors, check hull sound bilges and tanks and visually inspect compartments where possible. Make ships position available to radio room/ GMDSS station, satellite terminals and other automatic distress transmitters and update as necessary. Communicate with engine room & switch sea suction if necessary. Determine what type of bottom vessel is aground on. Determine if threat of oil pollution exists.</p> <p>Determine depth of water around vessel. Determine effects of tide and current. Determine placement of assist boats, maintain communications with assist boats and crew, keep crew away from towing lines, and exhibit proper signals and alert passing traffic. Obtain weather forecast. Determine the possibility of the vessel sliding off the grounding site and being broken by heavy weather. Check stability and stress criteria.</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	<p>Action to be taken if collision is imminent and following a collision BR impairment of the watertight integrity of the hull by any cause.</p> <p>Assessment of damage control.</p> <p>Emergency steering.</p>	<p>Broadcast “<i>distress</i>”, “<i>alert</i>” and “<i>message</i>” if the ship is in grave an imminent danger an immediate assistance is required, otherwise broadcast an “<i>urgency</i>” message to ships in the vicinity. Sound proper signals, alert engine room, assess damage and determine if vessel has lost watertight integrity. Check stability and stress criteria. Check for injuries to personnel. Maintain with other vessel and determine if threat of oil pollution exists. Monitor the weather. Maneuver the vessel to minimize the effect of further damage.</p> <p>Assign crewmembers specific duties and areas to assess regularly and instruct in communication. Check stability and stress criteria. Initiate temporary repairs if possible determine if it is possible to continue the voyage or to divert for repairs. Ballast/ Deballast/ Transfer water or fuel to maintain intact stability.</p> <p>Post emergency guidelines on bridge and conduct drills with crew regularly.</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	Emergency towing arrangements and towing procedures.	Familiarize crew with proper rigging of insurance wire and towing wire and safety precautions to be taken, maintain communications with crew and towing vessel and alert passing traffic to situation and exhibit proper lights and shapes.				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
<p>Maneuver and handle a ship in all conditions.</p>	<p>Maneuvering and handling a ship in all conditions including: 1) Maneuvers when approaching pilot stations and embarking or disembarking pilots, with regard to weather, tide, head reach and stopping distances. 2) Handling ship in rivers estuaries and restricted waters having regard to the effect of current, wind and restricted water on helm response. 3) Application of constant rate of turns techniques.</p>	<p>Reduce headway of vessel and maintain steerage by using the engines rudder or maneuvers, understand head reach advance and transfer. Understand the effect of deadweight, draft, trim, speed and underkeel clearance on stopping distances.</p> <p>Understand the effects of wind and current on vessels with slow speed. Make a proper lee. Understand wind effects on light vessels. Understand the effects of different currents i.e. fair head, crossing or rotary. Understand how trim affects handling characteristics.</p> <p>Understand how to use a rate of turn indicator, how to substitute in lieu of an indicator, and how it improves the steering capability of a poor-handling vessel.</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	<p>4) maneuvering in shallow water including the reduction in underkeel clearance caused by squat and rolling and pitch..</p> <p>5) interaction between passing ships and between own ship and nearby banks (canal effect)</p> <p>6) berthing and unberthing under various conditions of wind tide and current with and without tugs.</p> <p>7) ship and tug interaction.</p>	<p>Understand the concept of squat, the factors determining squat and the effect it has on maneuverability.</p> <p>Understand the concept of bank suction and bow suction, interactive forces when meeting and how to use to own vessels advantage.</p> <p>Understand the effects of wind, tide and current while berthing and unberthing light and loaded vessels, be able to detect lateral motion and speed, while docking. Instruct crew on giving distances on approaching berth, take advantage of wind and current while maneuvering.</p> <p>Instruct crew on how to properly secure and release tugs, both for the safety of the tug crew and the ships own crew. Understand different characteristics of tugs, i.e. single screw, twin screw, or z-drive. Position tugs for maximum leverage in regard to pivot point.</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	<p>8)use of propulsion and maneuvering systems.</p> <p>9)choice of anchorage, anchoring with one or two anchors in limited anchorage's and factors involved in determining the length of anchor cable to be used.</p> <p>10)dragging anchor and clearing fouled anchors.</p> <p>11)dry-docking both with and without damage.</p>	<p>Understand different maneuvering capabilities of single screw, twin screw, single rudder, or twin rudder and combinations their of.</p> <p>Understand the limitations and advantages of various engines, steam, diesel, and variable pitch. Understand use of thrusters taking into account immersion depth.</p> <p>When anchoring take into account direction and current, depth of water, type of bottom, location of hazards, maneuvering room for approach, number and location of ships already at anchor, conditions affecting visibility weather and currents, and swinging room after anchoring.</p> <p>Determine dragging anchor by watching chain for skips and observe anchor bearings. Clear fouled anchors by taking into account wind and current.</p> <p>Secure lines from dry-dock as soon as possible , position fenders along vessel, maximum crew attending tugs, minimum speed of vessel on dry-docks.</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	weather Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	<p>12) management and handling of ships in heavy weather including assisting a ship or aircraft in distress towing operations, means of keeping an unmanageable ship out of the trough of the sea lessening the drift and use of oil.</p> <p>13)precautions in maneuvering to launch rescue boats or survival craft in bad weather.</p> <p>14)methods of taking onboard survivors from rescue boats and survival craft.</p>	<p>Understand how to change the apparent period of wave crests by altering the course and speed of the vessel so as to reduce the rolling period in severe weather, adjust length of tow so both vessels will be in step with an appropriate size hawser to sustain the strain when assisting a ship or aircraft in distress. Approach from the downwind side using engines to maintain position and taking into account the set and drift of both vessels. Instruct crew in the proper dispersal of animal or vegetable oil to help prevent forming and breaking of waves.</p> <p>Launch rescue boats taking into account set and drift of both vessels, taking care to launch with all safety precautions in large swells.</p> <p>Instruct crew in proper rigging of safety harness hoists, netting to assist onboard.</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	<p>15) Ability to determine the maneuvering and propulsion characteristics of common types of ships with special reference to stopping distances and turning circles at various drafts and speeds.</p> <p>16) Importance of navigating at reduced speed to avoid damage caused by own ships bow wave and stern wave.</p> <p>17) practical measures to be taken when navigating in or near ice or in conditions of ice accumulation on board</p> <p>18) use of and maneuvering in and near traffic separation schemes and in vessel traffic service (vts) areas</p>	<p>Understand the information found o posted maneuvering characteristics on vessels.</p> <p>Understand the forces acting on a vessel in severe weather and the concept, the lower the speed the easier ride a vessel will have, easing these forces off.</p> <p>Take measure to reduce topside icing or implement ice-removal methods as it results in a loss of freeboard and stability. Have vessel trimmed properly when entering ice areas reduce speed when in ice areas and post additional lookouts. Train crew in ice reporting, damage control procedures and survival precautions, consult all publications available i.e. ice atlases sailing directions. Train officers in content of ice reporting messages.</p> <p>Follow port rules for area VTS services, as in sailing directions and coastal pilots. Follow applicable rules of the road</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Operate remote controls of propulsion plant and engineering systems and services.	<p>Operating principles of marine power plants</p> <p>Ships auxiliary machinery</p> <p>General knowledge of marine engineering terms</p>	<p>Understand the general operating principles, advantages and limitations of :</p> <p>a) Steam turbine engines b) diesel engines c) gas turbines .</p> <p>Understand bridge control of the propulsion plant, transfer of and have operation guidelines posted.</p> <p>Understand different types of steering engines: electric, hydraulic and kort nozzles.</p> <p>Understand different types of propellers advantages and limitations of: fixed, controllable pitch, skewed, shrouded (kort nozzles) and cycloidal.</p>	In-service experience or marine propulsion plant simulator training.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Plan and ensure safe loading stowage, secure care during the voyage and unloading of cargoes.	<p>Knowledge of and ability to apply relevant international regulations, codes and standards concerning the safe handling and transport of cargoes.</p> <p>Knowledge of the effect on trim and stability of cargoes and cargo operations.</p> <p>Use of stability and trim diagrams and stress calculating equipment including automatic data based (adb) equipment and knowledge of loading cargoes and ballasting in order to keep hull stress within acceptable limits.</p> <p>Stowage and securing of cargoes on board ships including cargo handling gear and lashing equipment.</p>	<p>Use and familiarization with applicable regulations such as (IMDG) international maritime dangerous goods code and code of safe practice for solid bulk cargoes.</p> <p>Knowledge of stability and trim with regard to the loading and discharge of cargo ability to determine the change of trim, affect on longitudinal and transverse stability trimming moments and the effect of changing salinity.</p> <p>Demonstrate use of stability, trim and stress tables, diagrams and stress tables, diagram and stress calculation equipment to ensure stability and stress conditions are at an acceptable level.</p> <p>Familiarization with various cargo handling systems: roll/on, roll/off, conventional boom, cranes, container facilities and reffer equipment.</p> <p>Familiarization with lashing equipment and proper methods of securing.</p>	In service experience, demonstrate use of or approved simulator training where appropriate.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	<p>Loading and unloading operations with special regard to the transport of cargoes identified in the code of safe practices for cargo stowage and securing.</p> <p>General knowledge of tankers and tanker operations.</p>	<p>Familiarization with the code of safe practices for cargo stowage and securing.</p> <p>Knowledge of:</p> <p>1) Regulations concerning the safety of personnel on board a tanker in port and at sea.</p> <p>2) health hazards and precautions to be taken</p> <p>a) Dangers of skin contact</p> <p>b) inhalation and accidental swallowing of cargo.</p> <p>c) oxygen deficiency, with particular reference to inert-gas systems</p> <p>d) harmful properties of cargoes carried</p> <p>3) fire prevention and fire fighting</p> <p>a) Fire and explosion prevention.</p> <p>b) Methods of fire fighting, both portable and fixed.</p> <p>4) pollution prevention</p> <p>5) Safety equipment.</p> <p>a) resuscitators</p> <p>b) escape and rescue equipment</p> <p>c) Use of protective clothing and equipment.</p>	<p>In-service experience demonstrate use of or approved simulator training where appropriate.</p>			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
		<p>6) Familiarization with emergency plan procedures.</p> <p>7) Cargo-equipment and operations.</p> <p>a) Piping systems, pumps, vapor return piping, overboard discharge valves, oil-ballast monitors and ballast systems.</p> <p>b) Safe loading and discharge procedures.</p> <p>c) ballast procedures</p> <p>d) Gas freeing and tank-cleaning procedures.</p> <p>8) Oil pollution regulation and reporting requirements.</p>				

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Carriage of dangerous cargoes	International regulations, standard codes and recommendations on the carriage of dangerous cargoes, including the international maritime dangerous goods (IMDG) code and the code of safe practice for solid bulk cargoes (bc code) Carriage of dangerous hazardous and harmful cargoes; precautions during loading and unloading and care during the voyage.	<p>Stowage distribution has been planned as per the IMDG code and BC code. Information on the cargoes carried is readily accessible.</p> <p>Plan the stowage of various hazardous cargoes carried on container, bulk, lash or ro/ro vessels.</p> <p>Know the separation requirements for class 3,4,5,6 and 8 cargoes.</p> <p>Identify what publications are required to be carried and demonstrate how they are used.</p>	In-service experience or an approved simulator course, or written test with 70% passing.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Control trim stability and stress	<p>Understanding of fundamental principles of ship construction and the theories and factors affecting trim and stability and measures necessary to preserve trim and stability.</p> <p>Knowledge of the effect on trim and stability of a ship in the event of damage to and consequent flooding of a compartment and countermeasures to be taken.</p> <p>Knowledge of IMO regulations concerning ship stability</p>	<p>Be able to calculate the stability and trim of a vessel.</p> <p>Understand the concept of transverse and longitudinal framing systems.</p> <p>Double hull vessels vs. single hull vessels.</p> <p>Understand the concepts of righting moments, equilibrium states, metacentric height rolling periods beam / draft ratio, effect of free surface on stability.</p> <p>Understand the advantages and disadvantages of stiff vs. tender.</p> <p>Understand how hogging and sagging affects a vessel.</p> <p>Understanding the effect of flooding on transverse stability and on reserve buoyancy.</p> <p>Demonstrate use of floodable length curves with compartment standards.</p> <p>Familiarization of IMO guidelines.</p>	In-service experience or an approved simulator course or a written exam with 70% passing.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Monitor and control compliance with legislative requirements and measures to ensure safety of life at sea, and the protection of the marine environment.	Knowledge of international maritime law embodied I international agreements and conventions. Regard shall be paid especially to the following subjects: 1.certificates and other documents required to be carried on board ships by international conventions, how they may be obtained and their period of validity. 2.responsibilities under the relevant requirements of the international convention on load lines. 3.responsibility under the relevant requirements of the international convention for the safety of life at sea.	Demonstrate knowledge of all certificates and documents required to be carried, including solas, load lines, pollution and health regulations. This includes their duration of validity, regulatory body and inspections required. For load line certificates, understand the zones individual marks, areas and seasonal periods and how they apply.	Written exam 70% passing or in-service experience on iso 9000/ism certified vessels where audits certify compliance.			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
	<p>4. Responsibilities under the international convention for the prevention of pollution from ships.</p> <p>5.maritime declarations of health and the requirements of the international health regulations.</p> <p>6.responsibilities under international instruments affecting the safety of the crew and cargo.</p> <p>7.methods and aids to prevent pollution of the marine environment by ships.</p> <p>8. national legislation for implementing inter National agreements and conventions.</p>	<p>Demonstrate knowledge of the regulatory authorities, how new rules are issued and enforced and how they are communicated to the public and industry.</p>	<p>Written exam with passing 70% or in-service experience on iso 9000/ism certified vessel where audits certify compliance.</p>			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Maintain safety and security of the ship's crew and passengers and the operational condition of life-saving, fire fighting and other safety systems.	<p>A thorough knowledge of life saving appliance regulations (international convention for the safety of life at sea). Organization of fire and abandon ship drills. Maintenance of operational condition of life saving, fire fighting and other systems. Actions to be taken to protect and safeguard all persons on board in emergencies.</p> <p>Actions to limit damage and save the ship following a fire's explosion collision or grounding.</p>	<p>Conduct fire and abandon ship drills aboard vessel in an organized and knowledgeable manner. Implement maintenance schedules on all life saving and fire fighting equipment and systems.</p> <p>Organize crew in emergency drills and include: closing watertight doors and automatic fire doors, shut ventilation fans, isolated damaged compartments check damage stability and stress criteria, sound bilges and tanks, consult cargo plan check vessel stability if large amounts of water are used for fire fighting purposes, and in case of fire maneuver the vessel so as to minimize the spread of fire.</p>	<p>In-service experience on ISO 9000/ISM certified vessels where audits certify compliance.</p> <p>In-service experience on ISO 9000/ISM certified vessels where audits certify compliance.</p>			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____

Soc. Sec. No. ____/____/____

Column 1 STCW Competence	Column 2 Performance Objectives	Column 3 Performance Measures (Mariner knowledge or action including consequences of same) Demonstration or Oral/Written Exam	Column 4 Performance Standards (Criteria against which performance is measured)	Date Of Assessment	Assessor's Initials	T / P
Develop emergency an damage control plans and handle emergency situations	<p>Preparation of contingency plans for response to emergencies.</p> <p>Ship construction including damage control.</p> <p>Methods and aids for fire prevention, detection and extinction.</p>	<p>Develop and implement emergency plans for:</p> <ol style="list-style-type: none"> 1)collision or contact with another vessel 2)grounding, stranding or touching bottom 3)fire and explosion 4)hull damage 5)equipment failure 6)personnel injury, sickness or death 7)distress/ search and rescue (where own vessel is required to render assistance to others or require assistance from others) 8)oil spill/ pollution 9)terrorism and piracy 10)rescue in enclosed space 11)helicopter operation 12)man overboard <p>Develop a damage control plan</p> <p>Demonstrate knowledge of:</p> <ol style="list-style-type: none"> 1)breathing apparatus 2)fire detection systems 3)smoke detection systems 4)fire control plans 5)fixed fire-extinguishing systems 6)international shore connection 	<p>Written exam passing 70% or in-service experience on ISO 9000/ISM certified vessel where audits certify compliance.</p> <p>Practical demonstration on ship or during fire fighting training and personal survival training.</p>			

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.

Specification of minimum standard of competence in _____

Name _____ Soc. Sec. No. ____/____/____

T/P Column – T designates that this competency will be evaluated with a written test question and is not evaluated on this form but the score will be marked on the last sheet of this form, P designates that this competency will be evaluated with a practical skills evolution.