

## MASTER <35m & Mate <80m NEAR COASTAL CHECKLIST

View the full [Skills & Knowledge](#) required for National Standard for Commercial Vessels Part D from which oral examinations sample a candidate's proficiency.

### International Rules for the Prevention of Collisions at Sea

#### Part A-General

Competent		More study	
	Nothing will exonerate- vessel - master - crew		Neglect of ordinary practice
	Definitions – vessel – pdv – sail - fishing		NUC - CBD – RAM - underway

#### Part B Steering & Sailing - Section 1

Competent		More study	
Application -Rule 4- Conduct of vessels in any condition of visibility			
	Lookout – Rule 5-	At all times Sight & hearing All available means Full appraisal	Safe speed -Rule 6- Visibility Traffic Manoeuvrability Background lighting Hazards Wind, Sea & Current Draught & Depth
	Risk of Collision -Rule 7-	All available means No change in Bearing Scanty information	Avoiding action -Rule 8- Positive & Timely Due regard Safe distance, slow, stop
	Narrow channels -Rule 9-	Starboard side 20 metres Sail & Fishing	Traffic Separate -Rule 10- Joining Crossing Anchoring

#### Part B Steering & Sailing - Section 11

Competent		More study	
Application -Rule 11- Conduct of vessels in sight of one another			
	Sailing vessels -Rule 12-	Port tack gives way Windward gives way Can't determine pt give way	Overtaking -Rule 13- 22.5° abaft beam Any doubt Subsequent alteration Alter to Pt/Stb
	Head on -Rule 14-	Reciprocal Any doubt Alter to Stb	Crossing -Rule 15- Slow or stop Avoid crossing ahead Avoid altering to port
	Give way -Rule 16-	Early & substantial Avoid crossing ahead Avoid altering to port	Give way -Rule 17- Keep course & speed Action to avoid collision by her manoeuvre alone
	Responsibility/vessels -Rule 18- a., b., c.	NUC- RAM-Fishing -Sailing	Responsibility/vessels -Rule 18- d., e. CBD-Seaplane

#### Part B Steering & Sailing - Section 111

Competent		More study	
Conduct of Vessels in Rest Visibility			
	Section 111- Applies to Conduct of Vessels in/near Safe speed-engines ready- lookout		Res vis -Rule 19- Avoid to port fwd beam Avoid aft beam Radar alone

**IRPCS- Part C- Lights & Shapes**

Competent	More study	
Application – Rule 20- All weather Sunset to sunrise Shapes by day		Exemptions/specifications – Annex
Definitions – Rule 21- Masthead 225° Side lights 112.5° Stern lights 135° Towing lights 135°		Visibility – Rule 22- Masthead Side lights Stern lights Towing lights  <12 mtrs or >12 to 50 mtrs
Lights – Rules 23-27 Pdv Towing & pushing Sailing & oars Fishing NUC & RAM		Lights – Rules 28-31 CBD Pilot Anchored Seaplanes

**IRPCS- Part D- Sound Signals**

Competent	More study	
Definitions – Rules 32 Short Prolonged		Equipment – Rules 33 <12mtr >100mtr
Manoeuvre– Rules 34 • •• ••• ••••• - - • - - •• - • - • -		Restricted Visibility– Rules 35 - - - - •• - ••• ••••• • - •  Anchored <100Mtrs Anchored >100Mtrs Aground <100Mtrs Aground >100Mtrs
Attracting attention– Rules 36		Distress Signals– Rules 37
Examiners comments:		

**IALA- Buoyage System A**

Competent	More study	
Lateral buoyage		Cardinals
Safe water, isolated danger		Special marks

## LEGISLATION

Competent	More study	Notes
<b>Outcome</b>	<b>Content</b>	<b>Standards for evaluating (extracts)</b>
<b>Outcome 9.6 b</b>  Execute appropriate watchkeeping arrangements and procedures	<b>Watchkeeping</b>	<ul style="list-style-type: none"> <li>• Watchkeeping arrangements &amp; practices comply with STCW, MOs &amp; Regs</li> <li>• Allocation/assignment/prioritisation resources</li> <li>• Assertive and leadership is demonstrated</li> <li>• Situational awareness is maintained</li> <li>• Consideration is given to watch experience</li> <li>• Watchkeeping is planned/organised and implemented, including: Standing orders, calling Master, taking over the watch; Clear weather, restricted visibility, darkness; Coastal, congested waters, anchor and in port; Navigation with a pilot onboard; Ship carrying dangerous cargo.</li> <li>• Comms &amp; bridge reporting procs are clear</li> <li>• Adopted procedures enhance nav. safety, marine environment and safety</li> </ul>
	Content/application/intent of Collision Regs	
	Watchkeeping principles	
	Bridge teamwork procedures	
	Ship reporting systems & VTS procs	
	Assessing watchkeepers' skills	
	Fitness, fatigue, drug and alcohol policy	
General provisions on ship routing		
<b>Competent</b>	<b>More study</b>	<b>Notes</b>
<b>Outcome 9.4 b</b>  Monitor and control compliance with legislative requirements	<b>Marine Legislation</b>	<ul style="list-style-type: none"> <li>• Information obtained relating to the safe nav. and ops of a vessel current and applied</li> <li>• Procs for monitoring ship's ops &amp; maint. comply with legislative requirements</li> <li>• Responsibilities under international maritime law in international agreements &amp; conventions are clearly identified, interpreted and applied</li> <li>• Procs &amp; comms used for co-ordinating SAR operations to IMO requirements</li> <li>• Understand and apply SMS standards &amp; emergency operating procedures</li> <li>• Understand/comply with crew inductions requirements</li> <li>• Determine/understand risk management</li> <li>• Source info on State waterways management regs - areas of ops, bar crossings and ports</li> <li>• Sensitive sea areas and restrictions, oil spill equipment and its limitations</li> <li>• Plan for coping with increased volume of garbage, bilge water, sludge and sewage</li> <li>• Consequence of pollution in cold climate</li> </ul>
	Local, State, Commonwealth Marine Law	
	NSCV	
	IAMSAR	
	MARPOL 73/78	
	STCW	
	SOLAS	
	IMO	
	Environmental legislation	
Safety management systems or plans		
<b>Competent</b>	<b>More study</b>	<b>Notes</b>
<b>Table 3</b>	<b>Environmental Responsibilities</b>	<ul style="list-style-type: none"> <li>• Identify safe and environmentally acceptable practices for:</li> <li>• Refuelling</li> <li>• Cleaning up fuel or oil spills</li> <li>• Understanding garbage, sewage, noise, anchoring or marine life and other environmental type maritime responsibilities</li> <li>• Antipollution procedures and equipment</li> </ul>
<b>Outcome Environment</b> Follow environmental work practices	Environmental workplace practices	
	Maintain environmental records	
	Precautions to prevent pollution	
	Oil spill and response	

## SIGNALS

Competent	More study	
<b>Table 9</b>  <b>Outcome 9.11 b</b> Organise and manage communications onboard to receive information and advice	<b>Communications</b>	
		Int.code flags & signal books
		Int. Code of Signals, Morse SOS
		GMDSS & Radio
		IAMSAR
		<ul style="list-style-type: none"> <li>• Information obtained from ICS and other publications relating to inter-ship communications is current and actioned</li> <li>• Procedures for monitoring ship's communication systems comply with legislative requirements</li> <li>• Communication procedures ensure that marine safety information and intership safety messages are received and acknowledged</li> </ul>

## MANAGEMENT

Competent	More study	
<b>Table 9</b>  <b>Outcome 9.10 b</b> Establish and maintain a harmonious workplace environment	<b>Organisation and Management</b>	
		Leadership style
		Group dynamics
		Conflict resolution
		Organisation skills
		<ul style="list-style-type: none"> <li>• Individual crew members are informed of the expected standards of work and behaviour and allocated appropriate duties</li> <li>• Crew training objectives and activities are based on an assessment of current competence and operational requirements</li> <li>• Initial indications and possible causes of conflict are promptly identified</li> <li>• Propose appropriate strategies to deal with conflict within the workplace</li> <li>• Communication skills used facilitate constructive response to conflict</li> </ul>

Competent	More study	
<b>Table 9</b>  <b>Outcome 9.13 b</b> Application of leadership and teamworking skills	<b>Teamwork</b>	
		Working knowledge of shipboard personnel management and training
		A knowledge of relevant international maritime conventions and recommendations and national legislation
		<ul style="list-style-type: none"> <li>• Ability to apply task and workload management including:               <ul style="list-style-type: none"> <li>– Planning and coordination</li> <li>– Personnel assignment</li> <li>– Time and resource constraints</li> <li>– Prioritisation</li> </ul> </li> <li>• Knowledge and ability to apply effective resource management:               <ul style="list-style-type: none"> <li>– Allocation, assignment and prioritisation of resources</li> <li>– Assertiveness and leadership including motivation</li> <li>– Obtaining and maintaining situational awareness</li> </ul> </li> <li>• Knowledge and ability to apply decision making techniques:               <ul style="list-style-type: none"> <li>– Situation and risk assessment</li> <li>– Identify and consider generated options</li> <li>– Selecting course of action</li> <li>– Evaluation of outcome effectiveness</li> </ul> </li> <li>• Development, implementation and oversight of standard operating procedures</li> </ul>

Competent		More study	
<b>Table 2</b>  <b>Outcome Elements of Shipboard Safety</b> Safety and Emergencies including survival craft	<b>Safety and Emergencies</b>		<ul style="list-style-type: none"> <li>• Practice survival techniques</li> <li>• Operate lifesaving and survival equip.</li> <li>• Practice with survival craft</li>   <li>• Understand/follow fire minimisation procs</li> <li>• Respond to and fight fires with portable and other fire fighting appliances including correct use of vessel closure and shutdown systems</li>   <li>• Undertake/understand risk management process including SMS operational practices</li> <li>• Follow safety procs and take action</li> <li>• Identify and respond to risks associated with confined spaces</li> </ul>
		Apply basic survival skills	
		Survive at sea using survival craft	
		Fire minimization	
		Fire fighting	
		Risk management & SMS	
	Meet WHS requirements (confined space)		
Competent		More study	
<b>Table 9</b>  <b>Outcome 9.8 b</b> Respond to navigational emergencies	<b>Emergency Procedures</b>		<ul style="list-style-type: none"> <li>• Contingency plans are formulated and adopted for emergency situations</li> <li>• Initial actions including manoeuvring in accord with contingency plans without risk to the vessel or crew safety are assessed</li> <li>• Follow-up actions are justified in accordance with marine safety procs</li>   <li>• Equipment utilised is appropriate and safe</li> <li>• Comms and reporting adopted are clearly defined and accepted</li>   <li>• Safety precautions and WH&amp;S followed</li> <li>• Actions when an emergency arises in port</li>   <li>• Distress alerts and procedures</li> <li>• Radio communications &amp; SARTs</li>   <li>• Actions to keep safe in emergency</li> </ul>
		Musters and Drills	
		Damage control	
		Beaching/grounding/refloating a vessel	
		Collision	
		Emergency steering	
		Emergency towing	
		Salvage arrangements	
		Assisting a vessel in distress	
		Heavy weather	
	Cyclones		
Competent		More study	
<b>Table 9</b>  <b>Outcome 9.5 b</b> Predict meteorological and oceanographic conditions	<b>Meteorology and Oceanography</b>		<ul style="list-style-type: none"> <li>• Weather forecasts for an intended voyage are obtained using all available data and the forecast</li>   <li>• Information obtained from observations, reports and instruments is deciphered and applied to ensure safety of the vessel</li> </ul>
		Vertical division of atmosphere	
		Heat exchange process	
		Cloud classification	
		Air masses and fronts	
		Synoptic chart analysis	
		Instruments	
		Tropical meteorology	
	Ocean currents & sea state		

## COASTAL NAVIGATION

<b>Competent</b>			<b>More study</b>	
<b>Outcome 8.9 b</b> Plan and conduct a safe passage and determine position	<b>Tides</b>			<ul style="list-style-type: none"> <li>• Relevant information is obtained /applied</li> <li>• The times/ heights from Australian or local tide tables for any port are accurate</li> <li>• Chart datum and relevance to the height of tide is understood &amp; practical examples</li> <li>• The publications used are current</li> <li>• Areas of extensive tidal effects</li> </ul>
			Basic tidal theory	
			Tidal prediction sources	
			Tide tables, Australian and local	
<b>Table 8</b>  <b>Outcome 8.9 b</b> Plan and conduct a safe passage and determine position	<b>Chart and Features</b>			<ul style="list-style-type: none"> <li>• The information obtained from navigational charts is relevant and applied</li> <li>• That chart symbols and features are identified or selected</li> <li>• That chart corrections are made using Notice to Mariners, are correctly inserted, and deleted as necessary</li> </ul>
			Information on a navigational chart	
			Chart scales	
			Latitude and longitude	
			Variation and deviation	
			Notice to Mariners	
<b>Competent</b>			<b>More study</b>	
<b>Table 8</b>  <b>Outcome 8.9 b</b> Plan and conduct a safe passage and determine position	<b>Coastal Navigation Techniques</b>			<ul style="list-style-type: none"> <li>• Apply info obtained from current nav charts and publications</li> <li>• Nav hazards are identified including ice</li> <li>• Estimated positions calc. accurately</li> <li>• Vessel position is accurately fixed</li> <li>• Plot a GPS derived position</li> <li>• Positions within acceptable accuracy</li> <li>• Fixing interval is appropriate to danger</li> <li>• Calc and measure from chart accurate</li> <li>• Charts selected are appropriate to the area of operation</li> <li>• Use of electronics include but not limited to: GPS, plotters, AIS, RADAR, depth sounders, communication systems</li> <li>• Use radar, range and bearing to plot the position on a chart. Check with GPS</li> <li>• Use parallel indexing to maintain a required distance off a point of land</li> <li>• Maintaining situational awareness</li> <li>• Ship routeing &amp; Traffic Separation S</li> </ul>
			Direction - true/mag/compass/gyro/relative	
			Compass error - variation deviation card	
			Coastal features	
			Position determined - dr/estimated/visual/radar	
			Laying off a safe course	
			Use of electronic aids to navigation	
			Publications for safe navigation	
			Reporting systems - Navigation Logs	
<b>Competent</b>			<b>More study</b>	
<b>Outcome 8.9 b</b> Plan and conduct a safe passage and determine position	<b>Instrumentation &amp; Navigation Aids</b>			<ul style="list-style-type: none"> <li>• Checks/tests on nav equipment to manufacturer's recommendation &amp; accepted nav practice</li> <li>• Operating procs are in accordance with manufacturer's recommendations</li> <li>• Performance limitations of equipment are considered</li> <li>• Use of electronic aids include but are not limited to: GPS, chart plotters, AIS, RADAR, depth sounders, communication systems</li> <li>• Care and maintenance of navigation aids</li> <li>• Automatic Pilots including use, change overfrom manual and vice versa</li> <li>• Nav equip maint, logs and updates</li> </ul>
			Compasses	
			Echo sounders	
			GPS, plotters and electronic charts	
			Interaction- nav. aids equip. alarm systems	
			Automatic steering systems	
			Basic understanding of ECDIS, ARPA, AIS	

## RADAR

Competent	More study		
<p><b>Table 8</b></p> <p><b>Outcome 8.10 c</b> Use radar to maintain safety of navigation and for collision avoidance</p>	<b>Radar - Fundamental Principles</b>		
		Principles & effects on performance	<ul style="list-style-type: none"> <li>• Components are identified as per manufacturer's specification</li> <li>• Demonstrate knowledge of fundamental principles and characteristics on performance of the radar and compensation during use</li> <li>• Setting up and maintaining displays</li> </ul>
		Major components and their siting	
		Wave length and frequency	
		Pulse transmission & pulse length	
		Range and bearing measurement	
	<b>Characteristics and Performance</b>		<ul style="list-style-type: none"> <li>• Factors affecting performance are recognised during use</li> </ul>
		Factors affecting performance	
		Maximum and minimum range	
		Bearing & range - detection & discrimination	
		Vertical and horizontal beam width	
		Radar horizon	
	<b>Functions and Adjustment</b>		<ul style="list-style-type: none"> <li>• Limitation and operating parameters of the radar are identified</li> <li>• Information obtained from radar is interpreted and analysed to assist in navigation and collision avoidance</li> <li>• Interpretation and analysis to be confirmed by alternative means</li> <li>• Misrepresented information is detected</li> <li>• Limitations and accuracy of equipment and information derived in prevailing conditions are identified</li> <li>• Search and Rescue Radio Transponders (SART) and Racons</li> <li>• Identification of critical echoes</li> </ul>
		Effect of target aspect and topography	
		Weather & atmospherics	
		Blind arcs and shadow areas	
		False echoes	
	Radar reflectors		
	Radar beacons and transponder beacons		
	Radar logs		
<b>Instrumentation &amp; Navigation Aids</b>		<ul style="list-style-type: none"> <li>• Procedures adopted to operate a radar set comply with manufacturer's recommendation</li> <li>• Controls are identified and adjusted to provide maximum performance</li> </ul>	
	Function of controls		
	Symbols for controls		
	Setting up and maintain display		
	Shutting down display		
	Maladjustments		
	Verification of range and bearing		

Competent		More study	
<b>Table 8</b>  <b>Outcome 8.10 c</b> Use radar to maintain safety of navigation and for collision avoidance	<b>Plotting and Collision Avoidance</b>		<ul style="list-style-type: none"> <li>Action taken to avoid a close-quarters situation/ collision accords to Col Regs</li> <li>Radar CPA &amp; TCPA</li> <li>Course and speed of other ship</li> <li>Detecting course changes of other ship</li> <li>Effects of changes in own ships course and/or speed</li> <li>Manoeuvring and restricted visibility signals to Col Regs</li> <li>Course and speed alterations prevent close quarter situations and accord to Col Regs and avoid navigational hazards</li> </ul>
		Radar presentations	
		Relative and true motion	
		Radar plotting & reporting	
		Collision avoidance & Col Regs	
		Parallel indexing	
		Basic understanding of ARPA	
<b>NAUTICAL KNOWLEDGE</b>			
Competent		More study	
<b>Table 9</b>  <b>Outcome 9.7 b</b> Manoeuvre a vessel in any prevailing conditions	<b>Vessel Handling and Manoeuvring</b>		<ul style="list-style-type: none"> <li>Demonstrate knowledge of handling</li> <li>Decisions made are justified with consideration to the vessel's manoeuvring and propulsion unit's characteristics in the prevailing conditions</li> <li>In analysing the safe manoeuvring of a vessel, explanation is given to: interaction, tide, current, passing vessels and own vessel's bow and stern wave</li> <li>Initial responses are concise and appropriate measures taken are adequate</li> <li>Safe operating limits are not exceeded</li> <li>Safety precautions followed are relevant</li> <li>Manoeuvre a vessel: Crossing a bar; following an quartering sea, berthing and unberthing; coming to and leaving a mooring; steering through an 's'; towing/being towed; turn short around; turn across the tide/wind; Williamson &amp; short turn around</li> </ul>
		Propulsion and manoeuvring systems	
		Manoeuvring in restricted waters	
		Effect on stopping distance and rate of turn – due to deadweight, draught, trim, clearance, speed	
		Squat, shallow water, interaction effects	
		Anchoring and approach to anchorage	
		Berthing manoeuvres	
		Embarkation and disembarkation of pilots	
		Heavy weather management inc. emergencies	
		Launch liferafts/boats & retrieving survivors	
	Traffic separation scheme		
Competent		More study	
<b>Table 9</b>  <b>Outcome 9.9 b</b> Prepare a cargo plan to ensure safe cargo operations whilst loading, unloading and during a voyage	<b>Cargo Operations</b>		<ul style="list-style-type: none"> <li>Information, procs &amp; docs relating to the handling of dangerous and harmful cargo are reliable and correctly identified in accord with IMDG &amp; awareness of MSDS</li> <li>Cargo operations and the distribution of cargo are planned using reliable info and in accordance with guidelines</li> <li>Emergency procedures for incidents involving dangerous and hazardous cargoes are appropriate</li> <li>Cargo monitoring procedures are appropriate – including scheduling of inspections to ensure all parts are checked in a given time</li> <li>Safety precautions and procedures comply with maritime regulations, procedures and WH&amp;S requirements</li> <li>Monitoring for damage, defects and corrosion including causes and prevention</li> <li>Considerations in severe weather</li> </ul>
		Purchases and tackle	
		Stresses/loads/SWL	
		Cargo handling and securing equip.	
		Cargo stowage and securing	
		Loading and unloading	
		IMDG & Bulk Cargo Codes	
		Ballasting	
		Documentation	
		Authorities requisites	
	Enhanced survey regime		

## VESSEL CONSTRUCTION, MACHINERY & STABILITY

Competent	More study	
<b>Table 9</b>  <b>Outcome 9.1</b> Demonstrate knowledge of the principal structural components of a vessel of 80 m in length	<b>Vessel Construction</b>	
		Principles of vessel construction
		Principal structural components
		Load lines conditions of assignment
		Design/testing for watertight integrity
		Structural arrangements to restrain fires
		Crucial structures for ship safety
	Regulatory requisites	<ul style="list-style-type: none"> <li>• Identify structural components from drawings/plans &amp; locate on a vessel</li> <li>• Demonstrate knowledge of the function of structural components in compliance with conventional maritime design</li> <li>• Identify various construction material and techniques</li> <li>• Demonstrate knowledge of the construction related to cargo</li> </ul>
<b>Table 9</b>  <b>Outcome 9.12 b</b> Work safely in enclosed spaces	<b>Confined space</b>	
		Asses confined spaces
		Seek permission to enter a confined space
		Plan and enter an enclosed space safely
	Take emergency action	<ul style="list-style-type: none"> <li>• Identify/minimise risks with e.s. entry</li> <li>• Seek authorisation or regulatory permission to enter an enclosed space</li> <li>• Prepare a plan for access into an e.s.</li> <li>• Manage work operations and safety requirements within an enclosed space</li> <li>• Meet regulatory requirements; including but not limited to permits, entry and exits, maintenance of equipment</li> </ul>
<b>Table 9</b> <b>Outcome 9.2</b> Manage a propulsion unit using the appropriate engineering systems and support services	<b>Engineering Systems</b>	
		Marine engineering terms
		Management of marine power units
		Ancillary equipment
	Safety alarm systems	<ul style="list-style-type: none"> <li>• Operation of prop/ancillary power units and equipment in accord with tech specs</li> <li>• Machinery is operated within the accepted safety parameters</li> <li>• Monitoring of safety and fire detection systems is in accordance with formulated emergency procedures</li> <li>• Operation of safety and fire-detection/suppression systems</li> <li>• Safety precautions/procs are appropriate</li> </ul>
<b>Table 9</b>  <b>Outcome 9.3 a</b> Manage stress and dynamic factors affecting a vessel's stability	<b>Stability</b>	
		Terms and definitions
		Forces and moments
		Centroids and centre of gravity
		Transverse and longitudinal dynamics
		Stability curves
		Loading and discharging weights
		TPC & MCT & final KG
		Density/specific gravity
		Dockwater & freshwater allowance
		Bilging and permeability Effects of free surface
		Virtual loss of GM
		Stress conditions including trim/stress tables
	Stress calculating equipment	<ul style="list-style-type: none"> <li>• Information obtained from a vessel's stability data book is interpreted correctly</li> <li>• Calculations associated with basic stability management are accurate</li> <li>• Correlate and interpret calculated stability Data</li> <li>• Stability and stress conditions are managed within safety parameters</li> <li>• Information communicated is relevant and Correct</li> <li>• Stability diagrams and illustrations are Accurate</li> <li>• Actions in the event of partial loss of intact stability</li> </ul>