

Examination questions from the “On-board ship equipment” course

Operative level			
On-board ship equipment			
Item	B/D	Question	Correct answer
1.	B	Gate gantry cranes are used: A. on ships for transporting containers and bulk loads, B. on Ro-Ro vessels, C. on drilling platform supply vessels, D. are not used.	<div style="border: 1px solid black; padding: 2px; text-align: center;">A</div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div>
2.	B	A boom crane is: A. a device that loads, holds and moves a load using a boom and a system of lines and rigging fastened to masts, columns, decks, B. a loading device for moving loads, operating without a system of lines and rigging fastened outside the perimeter of its own structure, C. a loading device for moving loads along rigid guides inclined at an angle greater than 15 degrees from the horizontal plane, between specified levels, usually to large heights, D. a loading device intended for transport of materials vertically and horizontally in a space limited by the track length, lifting and lowering altitude and the bridge width.	<div style="border: 1px solid black; padding: 2px; text-align: center;">A</div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div>
3.	B	On-board boom crane side sill is: A. a place where the boom rests during travel, B. a rotating column where the boom is mounted, C. a non-rotating column welded to the deck, D. none of the above.	<div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; padding: 2px; text-align: center;">B</div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div>
4.	B	The line that lifts a load is called: A. a topping lift, B. a guy, C. a schooner stay, D. a runner.	<div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; padding: 2px; text-align: center;">D</div>

5.	B	<p>SWL marking on a crane means:</p> <p>A. safe working load, B. maximum crane span, C. minimum crane span, D. permitted heel of the vessel.</p>	<div style="border: 1px solid black; padding: 2px; text-align: center;">A</div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div>
6.	B	<p>Supply of boom cranes with hydraulic actuation takes place via:</p> <p>A. a flexible hose, B. a cable with a relevant slack, C. slip rings and carbon brushes, D. a commutator.</p>	<div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; padding: 2px; text-align: center;">C</div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div>
7.	B	<p>The most common means to supply on-board equipment is:</p> <p>A. a pneumatic drive, B. a hydraulic or electric drive, C. sea water, D. a steam drive.</p>	<div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; padding: 2px; text-align: center;">B</div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div>
8.	B	<p>Gantries are a kind of lifting equipment:</p> <p>A. where the load-bearing structure is a travelling column or frame along which the trolley moves, B. that moves on a track located at a single level, C. that moves loads vertically and horizontally in a single vertical plane, D. that helps move various loads both in horizontal and vertical motion on relatively short distances.</p>	<div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; padding: 2px; text-align: center;">D</div>
9.	B	<p>The device used to disable engine movement of a relevant actuation mechanism when the mechanism reaches the limit position is:</p> <p>A. an automatic brake, B. an emergency stop switch, C. a limit switch, D. a load limiter.</p>	<div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div> <div style="border: 1px solid black; padding: 2px; text-align: center;">C</div> <div style="border: 1px solid black; height: 15px; margin: 2px;"></div>

10.	B	<p>Lifting force moment limiter is used:</p> <p>A. for cranes with constant lifting capacity, in the entire scope of crane operation characteristics,</p> <p>B. for heavy boom cranes,</p> <p>C. for rope winches,</p> <p>D. for cranes with load capacity changing in function of increasing span.</p>	<div> <div></div> <div></div> <div></div> <div>D</div> </div>
11.	B	<p>Ro-ro vessels accept loads using:</p> <p>A. loading hatches in the main deck,</p> <p>B. nose or stern gates,</p> <p>C. pipelines that connect a vessel with a manifold,</p> <p>D. gate gantry cranes.</p>	<div> <div></div> <div>B</div> <div></div> <div></div> </div>
12.	B	<p>Neutral gas generator systems are used:</p> <p>A. in container vessels,</p> <p>B. in gas carriers,</p> <p>C. in tankers,</p> <p>D. are not used.</p>	<div> <div></div> <div></div> <div>C</div> <div></div> </div>
13.	B	<p>Neutral gas shall be characterised by a low content of:</p> <p>A. nitrogen,</p> <p>B. carbon dioxide,</p> <p>C. oxygen,</p> <p>D. water steam.</p>	<div> <div></div> <div></div> <div>C</div> <div></div> </div>
14.	B	<p>On tankers, a manifold is used as:</p> <p>A. a place for connecting external pipelines,</p> <p>B. a landing place for helicopters,</p> <p>C. a place for controlling the capacity of loading pumps,</p> <p>D. a place for controlling load temperature.</p>	<div> <div>A</div> <div></div> <div></div> <div></div> </div>
15.	B	<p>Cargo pump drives in a tanker with a pump room are located:</p> <p>A. in the pump room,</p> <p>B. in the engine room,</p> <p>C. inside loading tanks,</p> <p>D. at the ship's deck.</p>	<div> <div></div> <div>B</div> <div></div> <div></div> </div>

16.	B	Remote control of cargo valves in a tanker takes place: A. from the ship's loading centre, B. from the bridge, C. from the engine control room in the ship's engine room, D. from the manifold.	<div>A</div> <div></div> <div></div> <div></div>
17.	B	In order to measure the level of cargo tanks for transporting liquid sulphur or asphalt, the following is used: A. float sensors, B. pressure sensors, C. a hand lead, D. radar sensors.	<div></div> <div></div> <div></div> <div>D</div>
18.	B	The medium flow regulation type in a hydraulic assembly (fig. 1.) is: A. a choke regulation, B. a capacity regulation, C. a gradual regulation, D. a synchronous regulation.	<div>A</div> <div></div> <div></div> <div></div>
19.	B	Medium flow regulation type in a hydraulic assembly (fig. 2.) is: A. a choke regulation, B. a capacity regulation, C. a gradual regulation, D. a synchronous regulation.	<div></div> <div>B</div> <div></div> <div></div>
20.	B	Sliding hold hatches operate in the following manner: A. the first panel has a built-in electric motor which causes individual panels to slide, via a gear that works with a sprocket, B. the first panel is lifted to a relevant height using hydraulic actuators, C. when opening, individual panels are "coiled" on one another, D. a drawing system is attached to the first panel, opening involves drawing the panels.	<div>A</div> <div></div> <div></div> <div></div>
21.	B	An engine of an anchor windlass shall ensure that the anchor chain is hauled in accordance with the current regulations of the Classification Society: A. at a speed of 15 m/s for 30 mins, B. at a speed of 30 m/s for 15 mins, C. at a speed of 30m/s for 30 mins, D. at a speed of 5 m/s for 10 mins,	<div></div> <div>B</div> <div></div> <div></div>

22.	B	<p>In the hydraulic system capacity regulation assembly (figure 5), the following is used:</p> <p>A. a pump with variable capacity and one pumping direction, B. a pump with constant capacity and one pumping direction, C. a pump with variable capacity and variable pumping direction, D. a pump with constant capacity and variable pumping direction.</p>	<div> <div></div> <div>B</div> <div></div> <div></div> </div>
23.	B	<p>Starting an AC supplied mooring winch is carried out:</p> <p>A. gradually, by using a starter, B. at once, by changing the switch position, C. by increasing revolutions manually and then continuing using a starter, D. by regulating voltage.</p>	<div> <div>A</div> <div></div> <div></div> <div></div> </div>
24.	B	<p>Automatic mooring devices:</p> <p>A. regulate mooring lines tensions, B. determine the vessel location, C. automatically select mooring lines lengths when mooring, D. none of the above.</p>	<div> <div>A</div> <div></div> <div></div> <div></div> </div>
25.	B	<p>Mooring mechanisms should be equipped with:</p> <p>A. two brakes - one stopper brake and one at the drum, B. one brake at the drum, C. one stopper brake, D. none of the above.</p>	<div> <div>A</div> <div></div> <div></div> <div></div> </div>
26.	B	<p>Figure 3 presents:</p> <p>A. a twin-drum mooring winch, B. a mooring capstan, C. a single-drum mooring winch, D. an anchor windlass.</p>	<div> <div>A</div> <div></div> <div></div> <div></div> </div>
27.		<p>A mooring head in a mooring and anchor winch:</p> <p>A. rotates only with a disconnected line drum or anchor power take-off, B. rotates always, regardless of the type of work, C. does not rotate when hauling an anchor or winding a line on a drum, D. rotates only along the line drum.</p>	<div> <div></div> <div></div> <div>B</div> </div>

28.	B	Figure 4 presents the following type of hatch cover: A. lift-away, B. coiling, C. folding, D. stocking.	<div> <div></div> <div></div> <div>C</div> <div></div> </div>	
29.	B	AC squirrel-cage rotors for anchor windlasses, after 30 minutes of operation at rated load shall be able to withstand a standstill in a braked state at rated voltage for no less than: A. 15 s, B. 30 s, C. 50 s, D. 120 s.	<div> <div></div> <div>B</div> <div></div> <div></div> </div>	
30.	B	AC squirrel-cage rotors for mooring winch drives, after 30 minutes of operation at rated load shall be able to withstand a standstill in a braked state at rated voltage for no less than: A. 15 s, B. 30 s, C. 50 s, D. 120 s.	<div> <div>A</div> <div></div> <div></div> <div></div> </div>	
31.	B	If a winch is used for anchor and for mooring, the gear speeds intended for mooring which are not adjusted to raising the anchor should have: A. a relevant protection preventing engine overheat, B. an additional third brake, C. pneumatic emergency controls, D. an additional hydraulic drive.	<div> <div>A</div> <div></div> <div></div> <div></div> </div>	

Appendices to examination questions

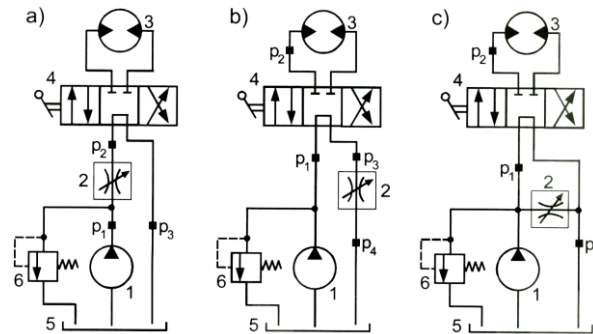


Fig.1. Medium flow regulation in a hydraulic assembly

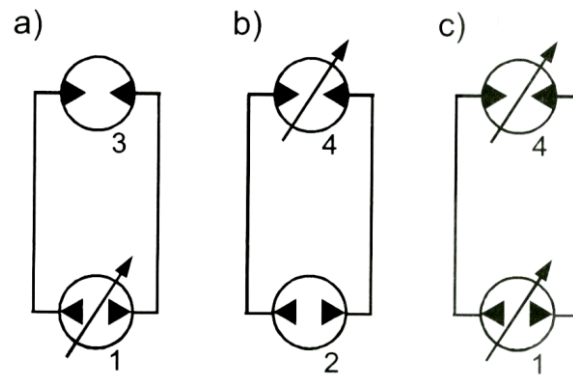


Fig.2. Medium flow regulation in a hydraulic assembly

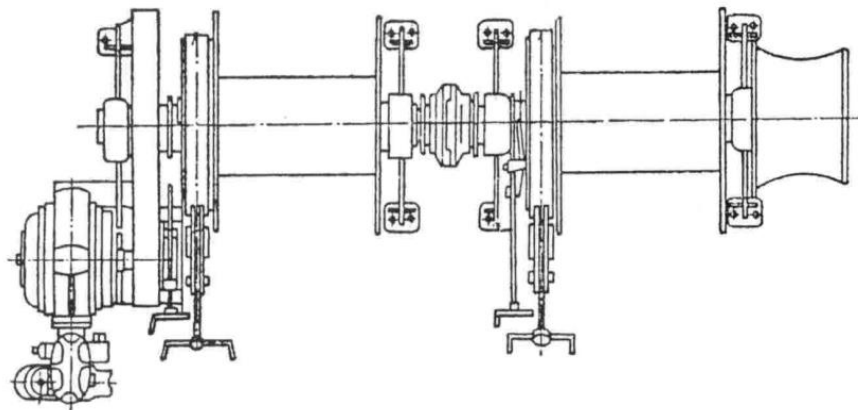


Fig.3. Mooring winch

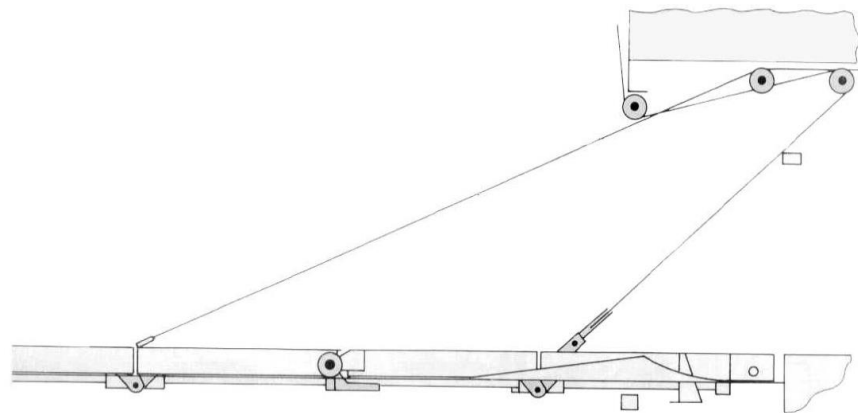


Fig.4. Types of hatch covers