

## OIC - EW: COMPETENCE 5

### Operate Fuel, Lubrication, Ballast and Pumping System and Other Associated Control System

1	Which component will receive the greatest load in a two-stroke/cycle diesel engine?			
	Lower half of the connecting rod bearing at the crankshaft end of the rod.	Upper half of the main bearing.	Lower portion of the piston pin bushing in the connecting rod.	All bearing halves share an equal load.
2	Which of the listed substances can be satisfactorily removed from diesel fuel by centrifuging?			
	Sludge	Gasoline	Fuel oil	Lube oil
3	Heating the fuel oil to an excessively high a temperature in a fuel oil heater will cause:			
	a loss of fuel oil suction	over firing the boiler	leakage at the burners	fouling of the heater
4	Lube oil is preheated before centrifuging in order to:			
	boil off water	prevent corrosion	reduce friction of the rotating components of the centrifuge	improve purification
5	The purpose of wearing rings as found in large centrifugal pumps is to:			
	prevent an internal explosion in the pump when it is overheated	enable a visual inspection of the pump while it is running	insure the proper alignment of the pump coupling to the driver	permit internal components that are subjected to high erosion conditions, to be replaceable thereby extending the service life of the pump
6	If your vessel burns 8 tons of fuel per hour at 15 knots, how many tons per hour will it burn at 18 knots?			
	13.82 tons	15.61 tons	16.00 tons	16.37 tons

7	A centrifugal ballast pump has a capacity of 200 gpm. If suction is taken on a ballast tank containing 200 long tons of seawater, how much water will be remain in the tank after discharging for one hour?			
	45.83 long tons	101.63 long tons	154.16 long tons	199.87 long tons
8	A hydraulic fluid flow control circuit, controlling linear actuator speed during extension, with the pump operating at system pressure, is known as a:			
	metered-in circuit	metered-out circ	bleed-off circuit	bleed-in circuit
9	After coolers are used with air compressors to:			
	reduce the temperature of compressed air	decrease the density of compressed air	dampen pressure pulses in the discharge air	ensure complete expansion of the compressed air
10	Cargo hose carried on tank vessels shall be able to withstand a pressure of at least:			
	75 psi	100 psi	120 psi	150 psi
11	One function of diesel engine lubricating oil is to:			
	induce carbon formation on cylinder walls	improve fuel penetration in the combustion space	form a friction reducing film between mating surfaces	lubricate the fuel injectors
12	The amount of oil atomized by a straight mechanical fuel oil burner depends on the sprayer plate size and the:			
	oil return pressure	fuel oil pressure	forced draft pressure	furnace air pressure
13	Which of the following is an indication that diesel oil contamination is present in the main engine lube oil system?			
	Lube oil viscosity has decreased	Octane number is increased	Cetane number has decreased.	Increase in lube oil pump discharge pressure.
14	If your ship burns 8 tons of fuel per hour at 15 knots, how many tons per hour will it burn at 18 knots?			
	13.8 tons	11.5 tons	10.7 tons	9.5 tons

15	A centrifugal pump produces flow with a resulting discharge head by energy conversion. It is typical for the energy conversion to follow the order of:			
	mechanical energy to kinetic energy to potential energy	mechanical energy to potential energy to		mechanical energy to kinetic energy to potential energy
16	A liquid is being transferred by a centrifugal pump. As the liquid passes through the volute, its velocity decreases and:			
	its pressure increases	its pressure decreases	the potential energy decreases	the kinetic energy increases
17	An axial piston pump differs from a radial piston pump as the pistons of an axial piston pump are positioned:			
	radially from the shaft	parallel to each other and to the shaft	parallel to each other but at a right angle to the shaft	at an angle to each other and to the shaft
18	If you attempt to tighten a leaking hydraulic fitting with pressure on the system, you will:			
	be successful every time	find that the pressure will prevent the components from being tightened	cause the system to vibrate	dislodge any scale in the tubing, and it will damage the system
19	In a boiler equipped with a convection type superheater, the superheater tubes are located:			
	in a position screened from the furnace flame	in the direct path of radiant heat flow	in a separately fired convection furnace	on the fireside of the screen tubes
20	On board supply vessels, a centrifuge is normally used to purify.			
	cooling water	fuel oil	sea water	diesel intake air
21	Overheating of the hydraulic fluid in an electro- hydraulic anchor windlass, may indicate pump cavitation caused by:			
	overload of the pump motor	low oil level in the reservoir	low fluid viscosity existing only around the shaft seal	high oil level in the sump

22	The lube oil coolers installed in a gravity lubricating oil system are located between the:			
	lube oil pumps and gravity tanks	gravity tanks and main units	gravity tanks and lube oil sump	lube oil sump and lube oil pumps
23	The tendency for lubricating oil to thin out at high temperatures and thicken at low temperatures will be characterized by a:			
	low viscosity index	high viscosity index	high neutralization number	low demulsibility quality
24	When the hydraulic control lever for a deck winch is placed in the neutral or off position, the spring set brake on the fluid motor drive shaft is:			
	engaged by spring action and only released by hydraulic pressure	released by spring action and hydraulically locks the winch when the drum ceases rotating	engaged by spring action plus hydraulic pressure	opened hydraulically and held open by spring action whenever the electrical supply is secured
25	Which of the following conditions can cause excessive lube oil consumption in a diesel engine?			
	Low lube oil temperature	Dirty lube oil strainer	Low lube oil pressure	High lube oil temperature
26	Which of the following statements is correct concerning the 'flash point' of a liquid?			
	It is lower than the ignition temperature.	It is the temperature at which a substance		It is lower than the ignition temperature.