


Merchant Marine Academy of Macedonia- School of Engineers		
Course: Maritime English	Academic year:2022-23	Exam period: June
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	Exam paper grade:	Instructor's signature

Match the sentences to the definitions. (10 points)

It detects all acids present; if it is elevated it may be an indicator of other harmful components.	a) Ash
It is expressed in kilograms per cubic metre; it mainly affects the fuel separation.	b) Flash point
Small particles of the catalyst (aluminium and silica oxides) used in the refining process and carried over into the residual fuel; they are porous, extremely hard, of irregular shape and abrasive in nature.	c) Sediment
It must be known for safe transport and storage and is set at minimum 60° C as per SOLAS regulations.	d) Lube Oil Blending on Board
A measure of the fluidity of a fuel at a certain temperature.	e) Cat fines
It consists of hydrocarbon sludge and is contained in all fuels; it is a parameter that is used to indicate and assess the stability and cleanliness of a fuel.	f) Density
It is expressed in degrees centigrade; is max 30°C; the lowest temperature at which the fuel will flow	g) Pour point
A new concept makes it possible to add additives to the engine system oil and then utilise it as cylinder lube oil.	h) Off spec fuels
It represents the incombustible components of fuel oil.	i) Acid number
Products that do not meet the Quality Specifications.	j) Kinematic Viscosity

ENGINE ROOM PRE- DEPARTURE CHECKLIST- Fill in the gaps with the correct word: commencement/ applicable/ disengaged/ Log/ available/ steering/ synchronized/ levels/ sufficiently/ parallel (10 points)

- Is main engine warmed up through ?
- Has turning gear been ?
- Are minimum of two alternators running and in?
- Are all main engine coolant and lube-oil sump correct?
- Have gear tests been carried out in all modes and two motors left in use?
- Has engine room clock been with bridge?
- Are air start compressors running and set on auto start (where?)
- Is power source for mooring winches (steam, hydraulic or electrical)?
- Are both Bell and books available?
- This checklist must be filled in prior to of stand-by.

State whether the following sentences are True (T) or False (F). (10 points)

- --- There are two bilge pumping systems.
- --- When the "finished with engine" order is given from the bridge, change over from engine room control to bridge control.
- --- Engines operating on high Sulphur fuels use special lubricants with high TBN to minimize the effects of Sulphur.
- --- Lube oil that has been used is clean and does not need to be centrifuged.
- --- The Chief Engineer can use new fuel oil, even if s/he has not received the analysis results.
- --- Ballast is taken on board in order to increase the list of the ship.
- --- The main purpose of the ballast system is to pump excess water out of the ship.
- --- According to MARPOL regulations, the residue of oil in the water that is pumped overboard must not exceed 15 ppm.
- --- A new blending on board concept makes it possible to add chemicals to the engine circulating oil and then use it as cylinder oil.
- --- Low ignition quality can mean poor combustion and diesel knock.

Complete the following sentences with an appropriate word. The first letter is given. (15 points)

- --F_____ and aft peak tanks, deep tanks, double bottom tanks and wing tanks are usually used for ballast water, depending on the ship's size.
- -- Open the priming plugs on the fuel v_____ and raise the pressure.
- -- Pump up the s_____ air reservoirs to their maximum pressure and
- d_____ them of water.
- -- F_____ up the fuel oil service tank with purified fuel oil.
- --Bilge water is not exactly water, but a mixture or variety of substances . It's a mixture of fresh water, sea water, oil, s_____, chemicals and various other fluids.
- -- Present o_____ of the main engine is 1,000 kilowatts.
- -- E_____ that power is available for deck machinery and bow thruster.
- -- The bilge h_____ tank is a huge tank where bilge water is pumped into from the bilge w_____ which depends on the ship's size, its capacity and the amount of bilge it generates.

Fill in the gaps with the following words. (15 points)

*shifting stringent flow pitch heeling discharge distribution priming
distillates rate fitted mud gravity mounted contaminated*

- Thebox is a kind of filter on the suction line head which is a perforated basket, necessary to prevent ashes and other particles from entering the pumps and choking them.
- Thebox is an appropriate box which contains valves, each of which controls the flow of bilge water from a bilge compartment or a bilge well.
- Several suction lines areon a manifold.
- Heavy fuel (residuals and mixtures of residuals and) must be purified in an efficient centrifuge before entering the service tank. There are several key points.
 1. Ensure that the correctdisc is used.
 2. Never exceed the flowrecommended for the grade of fuel in use. The lower the flow rate the better the efficiency. Consider using two or three centrifuges in series/ parallel as purifier/clarifier.
 3. Centrifuging is still recommended for the distillate fuels, MDO/MGO, as the fuel may bein the storage tanks.
- Presentof the propeller is 90 degrees.
- An anti-..... system is used to minimize the list (in port).
- The rules for the ballast system are lessthan the rules for bilge systems.
- Ejectors are self -and easily activated by turning on theof the driving water.
- We willdouble bottom tank.
- There are many reasons for taking ballast on board orballast, once it is on board.
- Suction lines are with valves.

Complete the sentences with the correct form of the words in the parentheses. (15 points)

- Sulphuric acid is highly _____ (**corrode**).
- Report _____ (**ready**) of the engine to the bridge.
- The _____ (**clean**) of cooling water has to be checked.
- Homogenizers can also deal with _____ (**incompatible**) problems.
- Cat fines are highly _____ (**abrade**).
- _____ (**add**) are used to improve lube quality.
- Are minimum of two _____ (**alternate**) running and in parallel?
- Ejectors are _____ (**rely**) in operation, as they don't have any _____ (**move**) parts. This is why _____ (**maintain**) is minimal.
- You have to obtain _____ (**permit**) from the bridge to test main engine ahead and astern on air.
- Check the _____ (**suitable**) of lube oil in the sump tank.
- Stop _____ (**add**) running generator.
- Fuel oil filters should be examined every few days in service, even if the _____ (**different**) pressure gauges are normal.
- The _____ (**ignite**) properties of heavy fuel oil are indicated by the CCAI.

Underline the correct answer (10 points).

-- The percentage of this in the fuel can be translated into a corresponding energy loss. It may cause corrosion in the fuel system.

- a) sulphur b) water c) vanadium

-- Governments and classification _____ have made up rules which have to comply with international SOLAS rules.

- a) societies b) groups c) organizations

-- The bilge system is a:

- a) safety optional system b) non-safety system c) safety system required by law

-- Depending on _____ and trim we choose which bilge well the water is collected in.

- a) ballast b) speed c) list

-- In the bilge system, all suction lines are fitted with _____ valves which do not allow the liquid to flow back to the bilge well.

- a) non-return b) safety c) throttle

-- Chemical element which contributes to air pollution. Its compounds can severely damage the engine parts they come in contact with.

- a) sulphur b) sodium c) vanadium

-- Regarding bunkering, check the ship supplier's paperwork to ensure the delivery _____ in terms of quality and specification with what has actually been ordered.

- a) applies b) requires c) conforms

-- Regardless of whether the service of an independent fuel analysis contractor is utilised or not, the C/E should take a continuous _____ sample at the manifold throughout the entire bunkering procedure.

- a) drip b) drop c) drizzle

-- Always order fuel according to the engine maker's _____ using the industry fuel oil standard ISO 8217.

- a) recommendation b) prescription c) approval

-- The corners of the lowest _____ of a ship constitute a bilge.

- a) component b) compartment c) department

Match the words to their definitions. There is one (1) extra word. (15 points)

emerge/ obstruct/ improve/ device/ dismantle/ miscellaneous/ carry out/ cloth/ comply with/ residue / replenish/ excess/ accumulate/ ullage/ component/ commencement

- block.....
 -- make better.....
 -- refill.....
 -- come out.....
 -- perform.....
 -- obey a rule.....
 -- disassemble.....
 -- various, different.....
 -- start.....
 -- sediment.....
 -- more than is acceptable.....
 -- appliance.....
 -- part.....
 -- collect, gather.....
 -- rag.....

