


Merchant Marine Academy of Macedonia- School of Engineers		
Course: Maritime English	Academic year:2021-22	Exam period: September
Semester: D	Date: 09/09/22	Instructors: A. Birbili, E. Xenitidou
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	Exam paper grade:	Instructor's signature

**Fill in the gaps with the correct preposition. You can choose from the following prepositions:**

**in, on, out, off, above, over, in, into, towards, at, with, from, after, before, to. (5 p.)**

There is no pumping .....present.

Preparations should be done prior .....arrival in port.

The temperature is too high. It is 29 degrees .....normal.

Decide whether the harbour manoeuvres should be carried .....on D.O. or H.F.O.

Change- .....should be executed one hour before the first manoeuvres are expected

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

The Chief Engineer can use new fuel oil, even if s/he has not received the analysis results. ---

Low ignition quality can mean poor combustion and diesel knock. ---

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. ---

Ballast is taken on board in order to increase the list of the ship. ---

A new blending on board concept makes it possible to add chemicals to the engine circulating oil and then use it as cylinder oil. ---

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. ---

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. ---

Water must be added to the lube oil when centrifuging. ---

Distillate fuels cannot be centrifuged. ---

Lube oil quality can cause problems to the engine. ---

There are no standards for the ignition quality of fuel, you can only have some indications you can take into account. ---

Homogenizers must be placed before the centrifuge. ---

A grinding tool can remove vanadium deposits from the turbocharger nozzle ring. ---

Cat fines do not cause abrasive wear. ---

**Match the words to their synonyms/definitions. There is one (1) extra word. (15 p.)**

Miscellaneous    replenish    excess    obstruct    trim    ullage    comply with    dismantle  
sounding    condensation    emerge    interval    disengage    component    device    box

- take apart, disassemble.....
- apparatus .....
- refill.....
- chest.....
- several, various.....
- obey a rule, an order.....
- the process of measuring the depth of a fluid in a tank.....
- come out.....
- let go.....
- period of time between two events/activities.....
- the process of steam or warm air changing to liquid.....
- more than is acceptable or necessary.....
- block sth so that things cannot move through easily.....
- part.....
- the difference between the fore and aft draughts.....

**Fill in the gaps with the following words: *shifting/ stringent/ flow/ pitch/ heeling/ discharge/ distribution/ priming/ distillate/ rate/ adherence/ mud/ gravity/ mounted/ contaminated***  
**(15 p.)**

- Ejectors are self - .....and easily activated by turning the .....of the driving water.
- The most probable cause of the flooding was lack of communication between the deck side and the engine room and lack of .....to proper procedures regarding the sound alarm.
- .....box is an appropriate box which contains valves, each of which controls the flow of bilge water from a bilge compartment of a bilge well.
- .....box 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.
- Several suction lines are .....on a manifold.
- Present .....of the propeller is 90 degrees.
- An anti-..... system is used to minimize the list (in port).
- We will .....double bottom tank.
- The rules for the ballast system are less .....than the rules for bilge systems.
- There are many reasons for taking ballast on board or .....ballast, once it is on board.
- 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 correct .....disc is used.
  2. Never exceed the flow .....recommended 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 be .....in the storage tanks.

**Choose the correct answer. (30 p.)**

- It is indicative of the ignition delay of residual fuels.
 

a) CCAI	b) cetane number	c) octane number
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- They are responsible for exhaust valve corrosion, known as "hot corrosion", and turbocharger deposits.
 

a) aluminium and silicon	b) vanadium and sodium	c) calcium and zinc
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-- They are indicators of used lubricating oils in the fuel.

- a) nickel and iron                      b) vanadium and silicon                      c) calcium, zinc and phosphorus

-- When you turn the engine with the turning gear, the \_\_\_\_\_ cocks must be open.

- a) drain                                      b) indicator                                      c) valve

-- A measure of the fluidity of a fuel at a certain temperature.

- a) kinematic viscosity                      b) pour point                                      c) density

-- It represents the incombustible metals present in a fuel.

- a) carbon residue                      b) acid number                                      c) ash content

-- 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

-- It indicates the ignition quality of distillate fuels.

- a) octane number                      b) CCAI                                      c) cetane number

-- It is used to indicate and assess the stability and cleanliness of a fuel.

- a) total sediment potential                      b) carbon residue                                      c) ash content

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

- a) societies                                      b) groups                                      c) organizations

-- One hour before arriving in port, you must shut and lock \_\_\_\_\_ direct overboard discharge.

- a) sludge                                      b) garbage                                      c) sewage

-- The bilge system is a:

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

-- \_\_\_\_\_ is the residue of the ship's cargo of fuel oil together with the water used to clean the tanks.

- a) Sludge                                      b) Slop                                      c) Waste

-- The lowest temperature at which the fuel is observed to flow.

- a) cloud point                                      b) flash point                                      c) pour point

-- It is expressed in kilograms per cubic meter and mainly affects the fuel separation.

- a) specific gravity                      b) density                                      c) kinematic viscosity

-- It must be known for safe transport and storage and is set at 60° C (minimum value) as per SOLAS regulations.

- a) flash point                                      b) melting point                                      c) boiling point

-- 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

-- When the ship is about to arrive in port, you must close the \_\_\_\_\_ for exhaust gas boiler and open bypass.

- a) valves                                      b) dampers                                      c) indicators

-- It indicates the coke-forming tendencies of a fuel.

- a) sodium                                      b) carbon residue                                      c) sediment

-- 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

-- They indicate the presence of tiny particles of aluminium and silicon used in the refining process and carried over into the residual fuels.

- a) acids                                      b) cat fines                                      c) sediments

-- The \_\_\_\_\_ box is a kind of filter on the suction line head which prevents solid particles from entering the pumps and choking them.

- a) strum                                      b) filter                                      c) sludge

-- Damage to \_\_\_\_\_ electrical equipment occurred because the engine room was flooded by 2.5 m forward and 3m aft.

- a) sunk                                      b) emerged                                      c) submerged



