

**Merchant Marine Academy of Macedonia- School of Engineers**

**Course: Maritime English**

**Academic year:2023-24**

**Exam period: February**

**Semester: D**

**Date: 20/02/24**

**Instructors: A. Birbili, E. Xenitidou**

**Student's name:**

**Student's number:**

**Exam paper grade:**

**Instructor's signature -**



**1.Fill in the gaps with a word from the list. (15 p.)**

anti-heeling	ejector	overboard	drydocking	strainers
ballast	separator	suction	trim	speed
store	regulations	choking	well	overflow

- According to MARPOL \_\_\_\_\_, bilge water must first pass through an oily water \_\_\_\_\_ before being discharged \_\_\_\_\_.
- Although bilge wells are helpful to \_\_\_\_\_ bilge water, they can be a threat to the engine room if they \_\_\_\_\_.
- During a(n) \_\_\_\_\_ operation at night, while at a shipyard in order to \_\_\_\_\_ the vessel for \_\_\_\_\_, it was discovered that the engine room was flooded.
- A(n) \_\_\_\_\_ creates a vacuum by the \_\_\_\_\_ of the water flowing through it.
- A(n) \_\_\_\_\_ system is used to minimise the list of the vessel in port.
- Bilge wells are always provided with \_\_\_\_\_ to prevent solid particles from entering the bilge pump and \_\_\_\_\_ it.
- All \_\_\_\_\_ lines are fitted with non-return valves which do not allow the liquid to flow back to the bilge \_\_\_\_\_.

**2. Fill in the gaps with a suitable word. The first letter is given. (15 p.)**

- Do not exceed a p \_\_\_\_\_ of 4 bar.
- Present r \_\_\_\_\_ of the main engine are 100 per minute.
- Present o \_\_\_\_\_ of the main engine is 1,000 KW.
- Do not exceed a t \_\_\_\_\_ of 20 degrees Celsius.
- Present p \_\_\_\_\_ of propeller is 90 degrees.
- C \_\_\_\_\_ over to high sea suction from low sea suction.
- F \_\_\_\_\_ up the tank with purified oil.
- Slop s \_\_\_\_\_ is 2 metres.
- Are starting air c \_\_\_\_\_ running and set on auto start (where applicable)?
- Make an examination inside the c \_\_\_\_\_ to make sure than no tools, cleaning rags or bars have been left inside.

**3. Fill in the gaps with the correct form of the word in parentheses. (20p.)**

- The \_\_\_\_\_ (corrode) effect of \_\_\_\_\_ (sulphur) acid is counteracted by adequate \_\_\_\_\_ (lubricate).
- You should check the \_\_\_\_\_ (suitable) of lube oil in the sump tank on a regular basis.
- CCAI 860 is \_\_\_\_\_ (accept) for slow speed engines.
- There was fast \_\_\_\_\_ (deteriorate) of the valve seats.
- Bilge water is not \_\_\_\_\_ (exact) water but a \_\_\_\_\_ (mix) or \_\_\_\_\_ (vary) of substances.
- Ash is a solid \_\_\_\_\_ (contaminate) in the fuel.
- \_\_\_\_\_ (impure) in the fuel can cause damage to the fuel pumps.
- Obtain \_\_\_\_\_ (permit) from the bridge to test main engine ahead and astern on air.
- They use \_\_\_\_\_ (add) to improve lube oil quality and reduce the \_\_\_\_\_ (possible) of salt water contamination.
- N/A in the checklist stands for not \_\_\_\_\_ (apply).
- Cat fines can be very \_\_\_\_\_ (harm) to the engine components.
- A bilge well is the most important \_\_\_\_\_ (residue) collection tank of the entire engine room.
- Calculated Carbon \_\_\_\_\_ (aroma) index is used as an indication of \_\_\_\_\_ (ignite) quality.
- Before mixing two lube oils, you must carry out a \_\_\_\_\_ (compatible) test.

**4. Match the following words to their synonyms/definitions. (10 p.)**

accumulate	versatile	comply with	trim	condensation
sounding	fouling	compulsory	precautions	replenish

- obey a rule.....
- making dirty.....
- refill.....
- gradually increase in quantity over a period of time.....
- something that has to be done.....
- the process for calculating the total quantity of fluid in a tank.....
- of many uses.....
- preventive measures.....
- the difference between the fore and aft draughts.....
- the process of steam or warm air changing to liquid.....

**5. Match the following parameters tested in marine fuels to their definitions / explanations. (10 p.)**

ash	carbon residue	density	sediment	sulphur
flash point	cat fines	water	viscosity	pour point

- It indicates the coke-forming tendencies of a fuel:
- It is a measure of fuel's resistance to flow:
- It represents the incombustible components of fuel oil:
- Small particles of the catalyst:
- It consists of hydrocarbon sludge and is contained in all fuels:
- It must be known for safe transport and storage of the fuel (expressed in degrees centigrade):
- The lowest temperature at which the fuel will flow (expressed in degrees centigrade):
- Its compounds can be very corrosive to cylinder liners and piston rings:
- It is expressed as per cent by volume; it may cause corrosion in the fuel system:
- It mainly affects the fuel separation: It is expressed in kilograms per cubic meter.

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

- --- There are two bilge pumping systems.
- --- After the ship has arrived in port, you should engage the steering gear and turn the engine for ten minutes.
- --- Wax can form at temperatures above the pour point.
- --- 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.
- --- 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, the residue of oil in the water that is pumped out into the sea, must not exceed 15 ppm.
- --- When the ship is about to arrive in port, you must open the dampers for exhaust exhaust gas boiler and close bypass.
- --- The bilge holding tank is a huge tank where bilge water is pumped into from the bilge wells.

**7. Choose the correct answer. (20 p.)**

- 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



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- obey a rule.....
- the process of steam or warm air changing to liquid.....
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- of many uses.....







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