

**MERCHANT MARINE ACADEMY OF MACEDONIA
SCHOOL OF ENGINEERS**

Course: Maritime English
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FINAL EXAM

1. Fill in the gaps using the words below. There are two extra words. (15 p.)

hydraulic propeller hazardous corrective unusual leaky axis relief
ventilated controllable temperature shafting pressure spots fixed vibration fires

- The crankcase _____ doors are spring- loaded valves which lift up in case there is any rise of _____ inside the crankcase.
- Hot _____ can be created in the crankcase as a result of sparks entering the crankcase due to _____ piston rings, or as a result of _____ in the adjacent scavenge trunks.
- Concerning the maintenance of marine diesel engines, any _____ operating conditions, increase in noise, _____, high exhaust temperature, and so on, must be investigated promptly and _____ actions must be taken.
- Bearings are used to support the _____ in a straight line between the main engine and the _____.
- In _____-pitch propellers, the pitch can be adjusted by a _____ mechanism which allows the blades to turn on their own _____.
- Bulk cargoes are _____ to prevent the formation of cargo sweat, to reduce the harmful heating of the cargo and to remove the _____ gases from the cargo spaces.

2. Fill in the gaps using the words below. There are two extra words. (15 p.)

solution dilution components fresh drain liners sensor alkaline insulation
combustion bulky centrifuge cargo corrosive intact flow temperature

- Structural _____ is required to thermally separate the compartments within a ship, since one _____ space or mechanical equipment space may need to be kept at a different _____ than an adjacent space.
- You must thoroughly _____ the fuel before using it and you must keep the filters clean and _____.
- Cooling air refers to the _____ of air that removes radiant heat from the main engine and other engine room _____.
- Since natural draft ventilation is too _____ for practical consideration, adequate quantities of _____ air are best supplied by fan-assisted ventilation systems.
- In freezing weather, you must carefully _____ all passages and pockets in the engine that contain fresh water and are subject to freezing, unless an antifreeze _____ has been added to the water.
- The electronic governor uses magnetic speed _____ to monitor the rpm of the engine.

-- The lubricating oil used in _____ conditions such as lubricating of cylinder _____ is mixed with certain additives to make it _____.

3. Fill in the gaps with a word of your own choice. (20 p.)

- Rapid cooling may crack a _____ liner and head or may cause a _____ to seize within a cylinder.
- It is important to carry out routine inspections of the oil _____ detector to prevent _____ alarms.
- Combustion air describes the air the engine requires to burn _____.
- Governors are also fitted in _____ diesel engines on the ship, which are used for _____ generation.
- Before the fuel is _____ into the cylinder, it should be absolutely free of _____ and foreign matter.
- You must keep the engines clean at all times and take steps to prevent oil or fuel from accumulating in the _____ or in other areas to prevent fire hazards.

4. Complete the sentences with the appropriate form of the words in parentheses. (15 p.)

- The main shaft is supported and held in _____ (**align**) by bearings.
- When the temperature of steam reduces, _____ (**condense**) takes place.
- _____ (**prevent**) measures should always be taken during bunkering.
- The second engineer hasn't finished the report yet. He needs an _____ (**extend**).
- You should fill in this _____ (**apply**) form and send it to the company.
- The situation in the Middle East is _____ (**explode**).
- International regulations try to reduce the _____ (**emit**) of ships' fuels.
- The _____ (**sensitive**) of the oil mist detector should be checked on a regular basis.
- If the _____ (**concentrate**) of oil mist in the measuring tube rises, the _____ (**intense**) of light reaching the photo-electric cell reduces.
- The screw-type propeller is the _____ (**propel**) device used in almost all ships.
- Depending on the _____ (**long**) of the shaft, there can be two or more shafts coupled by bolting _____ (**arrange**).
- The authorities used _____ (**disperse**) to break up the oil spill in the Gulf of Mexico some years ago.
- The 4th of July in the US is called the _____ (**depend**) day.

5. Write the opposites of the following words. (10 p.)

- | | |
|----------------|----------------|
| -- legal | -- possible |
| -- responsible | -- equality |
| -- careful | -- assemble |
| -- manned | -- compose |
| -- balance | -- significant |
| -- harmful | -- appropriate |
| -- honest | -- moral |
| -- experienced | |

6. Match the words to their definitions. There is one extra word. (10 p.)

reliable bulky disperse adverse impact ductwork inverse stationary
effective range accumulate rupture dedicated durable condense evolving

opposite esp. in order or position _____
 cause to break or burst _____
 standing still; not moving _____
 intended to be used for one particular purpose _____
 (of a gas) become liquid, esp. by becoming cooler _____
 dependable _____
 having great size or mass _____
 gradually developing _____
 able to last, long-lasting _____
 having a powerful influence on sth/smb _____
 build up _____
 vary between limits _____
 the total of all pipes or tubes _____
 producing the desired result _____
 scatter or spread in different directions _____

7. Read the following article and answer the questions that follow. (15p.)**FIRE IN THE ENGINE ROOM!**

As any seafarer who has experienced it will undoubtedly agree, a fire at sea is a frightening experience. The fire brigade may be thousands of miles away! The most common ship fire is in the engine room, and the usual cause is oil leaking from pipes under high pressure, specifically from the fuel pump discharge.

When a high-pressure fuel line fractures or a gland leaks, fuel oil is released as a fine spray that will readily ignite upon contact with a hot surface such as the engine exhaust. The resulting blaze is immediately fierce, and being constantly fed with fuel from the high-pressure line, will rapidly become impossible to fight with extinguishers and hoses. It will probably be necessary to evacuate the engine room within a very few minutes, and use the remote stops to stop the pump and shut-off the fuel supply. Damage will be severe, with a high risk of loss of life, and the ship may well be lost.

Because of the high risk and severe consequences from high-pressure oil line leaks, the fuel oil pump discharge lines are double-skinned so that any fuel leaks are contained and the leakages safely drained to a tank. The integrity of the outer skin is essential to prevent any leaking oil from spraying over a hot surface and the consequent fire.

DO regularly check the fuel oil drain tank and ensure the alarm is functioning to ensure that any leakage from the inner pipe is detected.

DO ensure that the outer protective skin of fuel oil pump discharge lines is frequently checked and immediately renewed if any damage or deterioration is found.

DO confirm that the remote stops and quick-closing valve mechanisms work by regular testing – and that ship's crew know where they are and how to use them.

(Retrieved: 09 September, 2015 from www.britishmarine.com)

1. What is the most usual fire on board and how is it caused?
2. What happens when there is fuel leakage in the engine room?
3. How can you prevent a fire in the engine room from spreading to the rest of the ship?
4. Why are the fuel oil pump discharge lines double-skinned ?
5. What advice is given in the article to minimise the risk of fire in the engine room?

GOOD LUCK!!!