

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

Course: Maritime English

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Student's full name:

A.F.M.:

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FINAL EXAM

A. Fill in the gaps using the words below. (15 p.)

screws volute rotary centrifugal multistage
displacement impeller casing reciprocating vanes

There are two main groups of pumps: the _____ pumps and the _____ pumps. The 1st group is subdivided into _____ pumps in which a piston moves up and down, and _____ pumps in which the moving part rotates. The rotating part can be gears, _____, _____, etc. The centrifugal pump on the other hand consists of an _____ which rotates at high speed inside the pump _____. The most common type of centrifugal pump is the _____ which has taken its name after the spiral case which surrounds the impeller. If the centrifugal pump has two or more impellers, it is called _____.

B. Fill in the blanks with the following words. (15 p.)

high grooves film lubricators return rings
neutralises fuel wear storage

The lubrication of the cylinder is very important, first because it forms an oil _____ between piston rings and cylinder liner, thus reducing friction, and secondly because it _____ the acid products of combustion and reduces cylinder _____ considerably. The cylinder oil has _____ viscosity and a high TBN value. It is drawn from the cylinder oil _____ tank to a small service tank by separate pumps. From there, the oil is supplied to _____ by gravity and is led through drillings onto the liner surface where _____ distribute it circumferentially around the liner, and the piston _____ spread it up and down the surface of the liner. There is not

_____ of the used oil because it is finally burnt with the
_____.

C. Match the words to their explanation. (5 p.)

- | | |
|-----------------------------|--------------------------------------|
| 1. insulate | a. balancing/mixing tank |
| 2. buffer tank | b. go down, sink |
| 3. pressure retaining valve | c. increase, enhance |
| 4. sludge | d. disperse through outward movement |
| 5. settle down | e. excess |
| 6. centrifuge | f. protect against heat dispersal |
| 7. boost | g. control, adjust |
| 8. regulate | h. pressure reducing valve |
| 9. purify | i. remove impurities, clean |
| 10. surplus | j. mud, deposits of fuel |

D. Write down the lubricant additive(s) which would help with the problem.

(10 p.)

1. Major accumulation of deposits on piston crown and cylinder liner:
2. Difficulty in pumping the lube oil at low temperatures:
3. Scored, scratched cylinder liner surface:
4. Fouled surfaces:
5. Signs of corrosion on metal surfaces:

E. What do the following words mean? Underline the correct choice. (8 p.)

1. to countersign: to **add/delete/deny** one's signature to a document
2. to crosscheck (of results): to **confirm/cross out/witness** the results by using an alternative way of checking
3. to verify: to prove that smth is **false/true/incomplete**
4. to retain (of pressure): to **maintain/reduce/adjust**
5. to sound (of a tank): to **measure/check/examine** the depth

F. Insert an appropriate derivative of the words in the parentheses. (15 p.)

1. High water _____ (**contain**) in the fuel causes _____ (**error**) combustion and _____ (**corrode**) to injectors.
2. Highly _____ (**viscosity**) fuels need special _____ (**treat**).
3. _____ (**distil**) fuels have cleaner _____ (**emit**) than _____ (**residue**) fuels.

