Merchant Marine Academy of Macedonia	NAME:
School of Engineers	
English Language	September 2013
Semester: E	
Instructors: A. Birbili, Dr E. Botonaki	

#### **Final Exam**

## A. Fill in the gaps with one of the words below. (20 points)

outlet viscosity film flyweight friction crack distilled lubrication centrifuge governor

--The escaping gases are directed to a safe \_\_\_\_\_\_. --The \_\_\_\_\_\_\_\_ system provides oil to the various moving parts of the engine. Its main function is to help the formation of a \_\_\_\_\_\_\_ of oil between the moving parts. This reduces \_\_\_\_\_\_\_ and wear. --The principal control device of any engine is the \_\_\_\_\_\_\_. --The cylinder oil \_\_\_\_\_\_\_ is relevant to the oil film thickness. --Sudden cooling can \_\_\_\_\_\_\_ the cylinders. --When topping off batteries, use \_\_\_\_\_\_\_ water. --A \_\_\_\_\_\_\_ assembly is used to detect engine speed. --A \_\_\_\_\_\_\_ cleans the lubricating oil in the system.

## **B.** Fill in the gaps using the words below. (15 points)

tailshaft	welding	loads	clockwise	dry dock
boss	pitch	erosion	thrust	propulsion

--A propeller which turns \_\_\_\_\_\_ when viewed from aft is considered right-handed.

--Suitable electrodes should be used for \_\_\_\_\_ up cracks on a propeller blade.

--The propeller should be examined thoroughly when the ship is in \_\_\_\_\_.

--The transmission system includes the thrust shaft, one or more intermediate shafts and the \_\_\_\_\_.

--The construction of the thrust block must be strong enough to withstand normal and shock \_\_\_\_\_.

--The \_\_\_\_\_\_ from the propeller is transferred to the ship through the transmission system.

--The propeller consists of a \_\_\_\_\_\_ with several blades of helicoidal form attached to it.

--One of the consequences of propeller cavitation is \_\_\_\_\_ of the blade surface.

--The thrust block may be an integral part of the main \_\_\_\_\_\_ engine.

--Propeller \_\_\_\_\_\_ is the distance advanced by one complete rotation of the propeller if there is no slip.

## C. Choose the correct answer. (15 points)

1. The operator must inspect the engine for a sufficient supply of fuel oil, lube oil and water before the engine is started. b. salt a. fresh c. cooling 2. The cylinder oil \_\_\_\_\_\_ is relevant to the oil film thickness. b. oiliness a. viscosity c. grease 3. All shafting is made from solid \_\_\_\_\_. c. silver b. copper a. steel 4. Sudden cooling can \_\_\_\_\_\_ the cylinders or cylinder heads. a. freeze b. crack c. spoil 5. All electrical wiring, \_\_\_\_\_\_ and security of connections should be inspected. a. isolation b. insulation c. instruction 6. The lube oil \_\_\_\_\_\_\_ should keep working after the diesel has been shut, to allow the lube oil to further cool down the engine. b. service tank a. sump tank c. pump 7. The oil film between the moving parts of an engine reduces \_\_\_\_\_\_ and wear. a. frictionb. corrosionc. vibration8. As the oil cooler is\_\_\_\_\_\_\_by sea water, any leakage in it will mean loss of oil and contamination of the oil by sea water. a. working b. circulating c.circulated 9. \_\_\_\_\_ bearings support the tailshaft and the propeller. a. Mainb. Sterntubec. Intermediate10. The cylinder relief valve is designed to relievemore than 10% to 20% above normal. a. speedb. temperaturesc. pressures11. Explosion relief valves serve to relieve excessive\_\_\_\_\_\_ pressures. a. engine room b. cylinder c. crankcase 12. \_\_\_\_\_ can occur as a result of pressure variations on the back of a propeller blade. b. Cracks a. Distortion c. Cavitation a. Distortionb. Cracksc. Cavitation13. Oil is distributed on the liner surface by themovement of the piston. b. reciprocating c. oscillating a. rotating 14. The temperature of the air in the cylinders should be high enough to \_\_\_\_\_\_ the injected diesel fuel. a. ignite b. burn c. compress 15. As the engine speed increases, the action of \_\_\_\_\_\_ force throws the flyweights of the governor outwards. b. gravitational c. centrifugal a. centripetal

## D. Fill in the gaps with a suitable form of the words in parentheses (15 points)

--Cavitation may cause the \_\_\_\_\_\_ (erode) of the blade surface.
--The lubricating oil is also used as a \_\_\_\_\_\_ (clean) or a \_\_\_\_\_\_ (cool).
--The general \_\_\_\_\_\_ (require) for cylinder oil viscosity is SAE 50.
--The electric governor uses a \_\_\_\_\_\_ (combine) of electrical and mechanical components.
--Clean oil can be provided from a \_\_\_\_\_\_ (store) tank.

--\_\_\_\_ (explode) relief valves prevent fires.

--The oil is drawn from the drain tank through a \_\_\_\_\_ (strain).

- --The \_\_\_\_\_ (transmit) system transmits power from the engine to the
- propeller. --Holes can be repaired with a \_\_\_\_\_ (suit) resin filler.

E. Match the words in column A to their synonyms in column B (10 points)

Α	В
supply	dirty
inspection	enough
basic	provision
sufficient	demand
lead to	main
foul	function
amount	deformation
require	quantity
operation	examination
distortion	cause

# **F.** Choose one of the three topics and write a paragraph of about 100 words. (25 points)

- A. Discuss possible causes of excessive lube oil consumption
- B. What checks do you perform before starting an engine?
- C. What types of governors are there? What is their function?