

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

Course: Maritime English

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A.F.M.:

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FINAL EXAM

A. Insert an appropriate word in the gaps. (15 p.)

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 _____.

B. Match the terms to their explanation underneath. (10 p.)

feed check valve main stop valve salinometer drain valve mountings

chemical dosing valve lag safety valve soot blower malfunction

- delay between two events _____
- a valve to control the entry of water to the boiler _____
- a valve to remove water from the system _____
- a gauge to check the salinity of water _____
- fittings, such as gauges and valves of the boiler _____
- a valve which controls the passage of steam to the engine _____
- a valve which releases the excess of steam _____
- a valve for adding chemicals directly to the boiler _____
- it removes the black carbon particles from the tubes of the boiler _____
- irregular or abnormal function _____

C. Fill in the correct preposition to complete the following Standard Marine Communication Phrases (SMCP). (10 p.)

- I am _____ attack _____ pirates.
- I have dangerous list _____ port. I am _____ danger _____ capsizing.
- I am flooding _____ the engine room.
- I have collided _____ iceberg. Crew must abandon vessel _____ collision.
- I am _____ fire. I am _____ critical condition.

D. Fill in the gaps with the following words. There are two extra words. (10 p.)

*compressed impeller inlet skirt gudgeon B.D.C. rotor
scavenge compression self-ignited T.D.C. crown*

- In a 4-stroke D.E. the piston is connected to the connecting rod with the _____ pin.
- The 2-stroke D.E. has _____ ports instead of a(n) _____ valve.
- The fuel is _____ because of the high temperature of the _____ air.
- The turbine _____ of the turbocharger is driven by the exhaust gases.
- At the end of the 1st stroke of a 4-stroke D.E. the piston is at the _____.
- The upper part of the piston is called _____ and the lower _____.
- The three upper part of the piston are _____ rings.

E. Write the names of the four strokes of a 4-stroke diesel engine and describe the compression stroke. (20 p.)

Names of the four strokes: 1. _____ 2. _____
3. _____ 4. _____

F. Underline the correct choice. (7.5 p.)

- In a **compressor / condenser** steam changes into water.
- In a **deaerating / balancing** tank water gets rid of air and other gases.
- The **service / condensate** pump draws the water from the **condenser / economiser** and discharges it into the **preheater / deaerating tank**.

- In a(n) **impulse / reaction** turbine the steam is directed from the nozzles against the stationary blades and turns the rotor.
- The reaction turbine is **more / less** efficient than the impulse turbine.
- In a steam plant of a reaction turbine, the **superheated / saturated** steam is fed into a **L.P. / H.P.** turbine first, where some of its **heat / mechanical** energy is converted into useful work.

G. What must you do when you notice a man overboard? Write 5 (five) sentences. (consider the words: lifebuoy, alarm, lookout, Williamson turn, visual contact) (10 p.)

1. I must _____
2. _____
3. _____
4. _____
5. _____

H. Which of the auxiliary machinery is used for... (7.5 p.)

- reducing rolling of the ship? _____
- supplying the ship with electrical power and lighting? _____
- handling the cargo? _____
- transferring liquids from one place to another? _____
- burning the garbage? _____

I. Supply the correct form of the word in parenthesis. (10 p.)

- There is a great _____ (**vary**) of liquids on board.
- Fire _____ (**detect**) warn us of a fire in a place.
- Sometimes in case of oil spills you use _____ (**disperse**).
- You must test the atmosphere for toxic and _____ (**flame**) gas _____ (**concentrate**).
- I require medical _____ (**assist**).
- The _____ (**neglect**) or _____ (**accident**) dumping of oil into the sea is a serious offence.
- As _____ (**prevent**) is better than cure, it is important to obey the international anti-pollution _____ (**regulate**).