

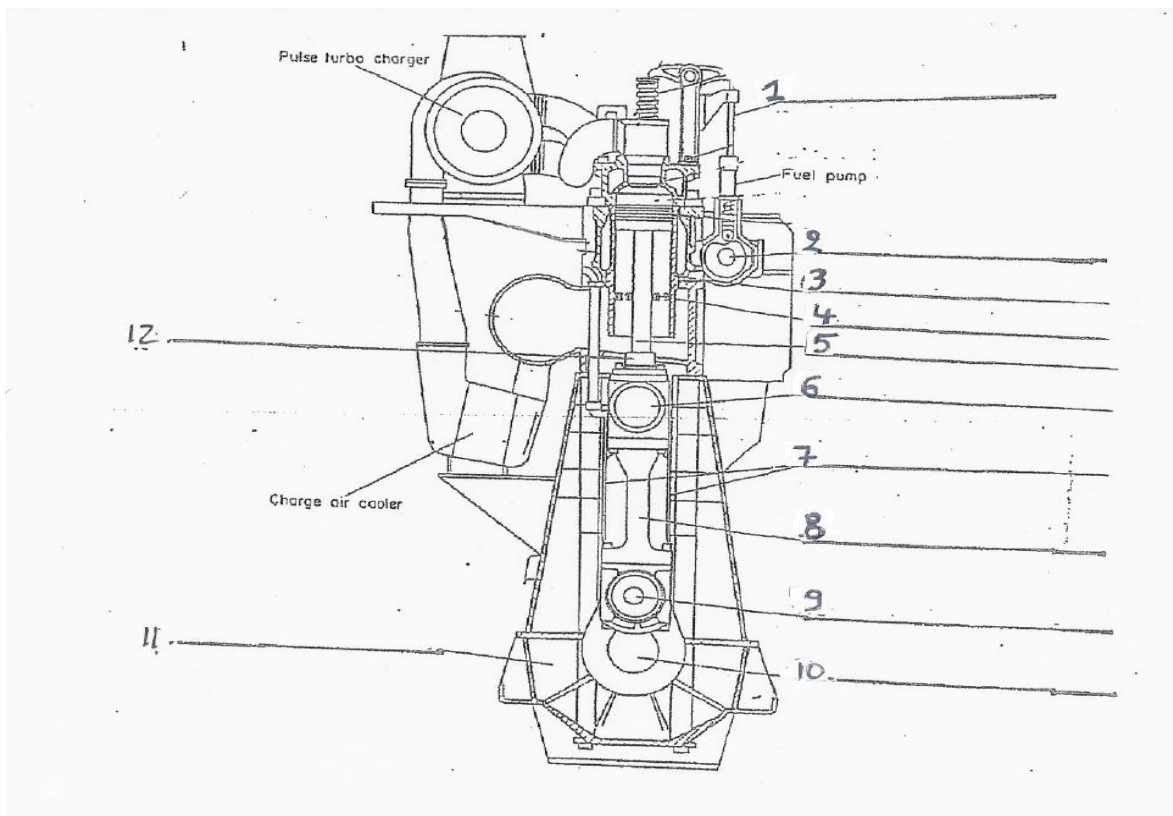
**MERCHANT MARINE ACADEMY OF MACEDONIA  
SCHOOL OF ENGINEERS**

**STUDENT'S FULL NAME:**  
**STUDENT NUMBER:**

**Academic year: 2013-2014**  
**Exam period: February**  
**Date: 13/3/2014**  
**Semester: A**  
**Instructor's name: Dr M. Tsompanoglou**

**FINAL TEST in English (Retakes)**

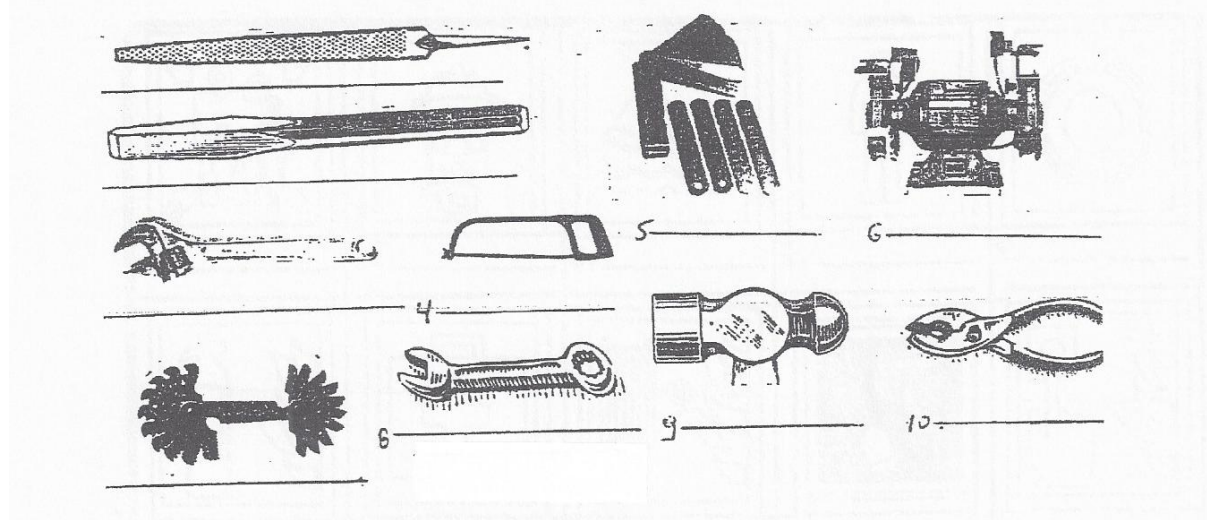
**1. Name the parts 1-12 in the following diagram of a 2-stroke diesel engine. (18 points)**



**2. Match the parts of the diesel engine to their functions. (10 points)**

1. crankshaft	a. opens the valves
2. camshaft	b. reduces friction
3. piston	c. compresses the air
4. cylinder liner	d. supports the whole engine
5. piston rod	e. reciprocates in the stuffing box
6. connecting rod	f. rotates and gives motion to the propeller
7. bedplate	g. gives rotating motion to the crankshaft
8. crosshead	h. connects the piston rod to the connecting rod
9. piston pin	i. connects the piston to the connecting rod
10. crank pin	j. connects the connecting rod to the crankshaft

**3. Identify the following tools and then answer the questions: (20 points)**



Which of the above tools are used to loosen or tighten nuts?

Which one is used to determine the pitch of screw threads?

Which one is used to smoothen a hard material?

Which ones are used for cutting metal?

Which one is used to measure narrow gaps?

**4. Underline the correct choice. (10 points)**

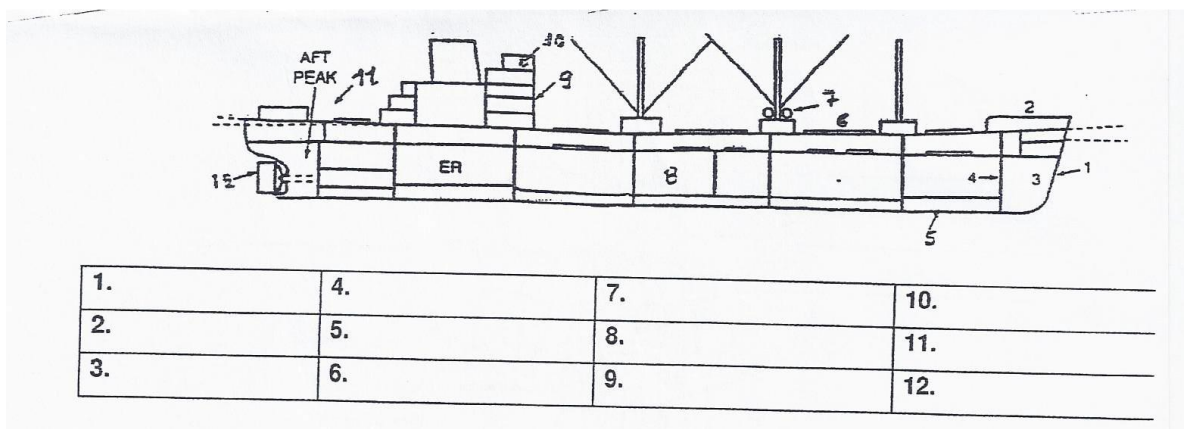
1. We use a (screwdriver, spanner, hammer) to tighten or loosen a nut.
2. A pair of (pliers, calipers, dividers) is used to measure thicknesses.
3. We smoothen and shape a surface with a (scraper, reamer, file).
4. For hexagonal screws we use a(n) (Allen key, open-ended spanner, ratchet wrench).
5. With a (screw-pitch gauge, feeler, reamer) we measure very small distances.
6. In order to hold an object firmly in its place while work is done, we use a (grinder, fitter's vice, lathe).

7. In order to cut internal threads we use (cutters, taps, snips).
8. Diesel engines are (spark-ignited engines, compression-ignited engines).
9. In the 2-stroke diesel engine one cycle of operation is completed in (one, two) revolutions of the crankshaft.
10. The camshaft is connected to the rocker arm with the (push rod, piston rod, connecting rod).

**5. Find the vessels which carry the following types of cargo. (10 points)**

1. Different types of vehicles:
2. Products which need refrigeration:
3. Liquefied natural gas:
4. Liquefied petroleum gas:
5. Passengers and cars:
6. Any type of cargo packed in containers of standard dimensions:
7. Dry loose cargo such as grain, iron, ore etc.:
8. Liquid loose cargo such as crude oil, diesel oil, etc.:
9. Any type of cargo in break-bulk form, eg. pieces of machinery, steel coils, rolls of wire, etc.:
10. Barges (Lighters):

**6. Name the following parts of the vessel. (17 points)**



**7. Complete the sentences with a suitable preposition: with, for, below, of, on, in. (10 points)**

- The bosun is responsible ..... the deck ratings.
- The superstructure is ..... the main deck of a vessel.
- The chief engineer's office is ..... the port side of the ship.
- Bulk carriers transport their cargo ..... bulk.
- ..... the forecastle, inside the bulbous bow, there is a forepeak tank.
- The engine room is ..... the superstructure.
- Feeler gauges consist ..... a number of thin blades.
- Are you familiar ..... the LSA?
- When you enter the lifeboat, you must be equipped ..... your lifejacket.
- The English writing test is ..... the 13<sup>th</sup> ..... March.

**8. Match the words to their definitions. (5 points)**

1. Collision	a. Device
2. Combustion	b. Dining room
3. Bunkering	c. Kitchen
4. Draught	d. To unload
5. Galley	e. To get onboard
6. Apparatus	f. Crash
7. To embark	g. Burning
8. To discharge	h. Depth of the ship below the waterline
9. Maintenance	i. Supplying with fuel
10. Messroom	j. Keeping up in good condition