

ΚΕΣΕΝ ΜΑΚΕΔΟΝΙΑΣ ΜΗΧΑΝΙΚΩΝ ΑΚΑΔ... ΕΤΟΣ 2023-24 ΕΞΕΤΑΣΤΙΚΗ ΠΕΡΙΟΔΟΣ B16	ΜΑΘΗΜΑ ΝΑΥΤΙΚΑ ΑΓΓΛΙΚΑ		ΗΜΕΡΑ	20	ΜΗΝΑΣ	06	ΕΤΟΣ	2024
			ΘΕΩΡΗΘΗΚΕ: Ο ΔΙΕΥΘΥΝΤΗΣ ΓΟΥΡΓΟΥΛΗΣ ΔΗΜ.					
A΄ ΚΥΚΛΟΣ	ΕΞΕΤΑΣΤΗΣ ΚΑΘΗΓΗΤΗΣ	ΣΓΟΥΡΟΥ ΜΑΡΙΝΑ						
B΄ ΜΗΧΑΝΙΚΩΝ	ΔΙΑΡΚΕΙΑ ΕΞΕΤΑΣΕΩΝ	8:15-10:30	ΜΕΓΙΣΤΗ ΒΑΘΜΟΛΟΓΙΑ		100			

ΘΕΜΑΤΑ ΕΞΕΤΑΣΕΩΝ

Ex.1 You will read a text about the works carried out during the annual survey of the port boiler. Decide if the statements below are **TRUE** or **FALSE** and complete the missing information. (Marks___ / 10)

Port Boiler Annual Survey: Works carried out

Removing 4 internal feed pipes, supplying 3 new feed pipes complete with flanges, perforating pipes as original pipes and fitting and jointing in position. Re-drilling perforation holes in 1 (one) existing feed pipe and refitting in place as originally.

Removing blowdown valve chests, opening up valve chests, machining valve lids and seats, reassembling valve, rejoining cover and packing glands and refitting valve chests to boiler shell. Checking safety valve spindles on lathe for truth, adjusting and refitting spindles.

Dismantling stop valve seat, supplying machining and fitting new valve seat, machining valve lid and grinding-in valve lid to seat.

Removing gauge glass fittings, supplying new Klinger type fittings, and renewing glasses.

Machining auxiliary stop valve seat, machining valve and grinding-in valve lid to seat.

Fitting 8 new zinc plates.

Removing, calibrating and refitting 2 (two) boiler pressure gauges.

Supplying 3 (three) new check valve lids, as spare.

15 (fifteen) common tubes expanded; 8 (eight) combustion stays caulked.

QUESTIONS

- The feed pipes which were removed were all replaced with new ones which were drilled properly and fitted in position. TRUE / FALSE
- The safety valve spindle was checked, adjusted and refitted. TRUE / FALSE
- The blowdown valve chests were opened, the valves were properly overhauled and refitted in the valve chests and on the boiler casing. TRUE / FALSE
- The gauge glasses were renewed TRUE / FALSE
- The auxiliary stop valve and its seat were both machined TRUE / FALSE
- No spare parts were ordered. TRUE / FALSE
- Two removed boiler pressure gauges were measured for truth before being refitted in position again. TRUE / FALSE
- The boiler tubes and the combustion chamber stays were in good condition. TRUE / FALSE
- Removing, calibrating and refitting _____ gauges.
- _____ expanded; _____ caulked.

Ex. 2 WRITING TASK. Write a letter to a friend giving detailed descriptions of two people you worked with during your training voyage. (The Master, Chief Engineer, Second Engineer). What do they look like? What are they like? Compare them in about 150-200 words. (Marks ___ / 10)

Ex. 3 This is part of an email requesting maintenance. Two sentences of this email are given in the wrong order. Put them in the correct order, so that the email makes sense. (Marks ___ / 2)

- (a) Additional information , / After (time) / please call us at (telephone number) / If you need
 (b) Your attention / As possible / to these repairs / We would appreciate / as soon

Ex. 4 Read the following sentences and write the appropriate MESSAGE MARKER for each one in the space provided. (Marks ____ / 8)

- | | |
|--|-------|
| 1. I will alter course. | _____ |
| 2. Advice all vessels keep clear. | _____ |
| 3. Please supply bunkers. Quantity: three thousand metric tonnes | _____ |
| 4. What is the depth in the outer fairway? | _____ |
| 5. The depth in the outer fairway is 20 meters. | _____ |
| 6. Reduce speed to five knots. | _____ |
| 7. Obstruction in the fairway. | _____ |
| 8. My cargo is iron ore. | _____ |

Ex. 5 On Board Communications. Oil Spill. The Chief Officer is talking with the bridge. Put the sentences in the correct order so that the dialogue makes sense. (Marks ____ / 12)

a. Spill waste contained in buckets.
b. Spillage stopped
c. How much is spilled?
d. Treat spill with absorbent materials. All crew assist to remove the spill.
e. Oil clearance team standing by.
f. Stop pumping! Is oil escaping into the sea?
g. Has spillage stopped?
h. Stand by oil clearance team and report.
i. Spill cleaned up with absorbent materials.
j. Spill about 2 tonnes.
k. No, oil is spilling on deck.
l. Leak at manifold connection.

Ex. 6 The following notes give information about the GAS EXCHANGE PROCESS in diesel engines. Write the terms in the appropriate place using the words from the box. (Marks ____ / 5)

Charging, uniflow scavenging, supercharging, scavenging, Loop scavenging
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- | | |
|--|-------|
| a. The process of removing exhaust gases from the cylinder after combustion and replenishing the cylinder with fresh air. | _____ |
| b. The gas exchange process in which the charge air passes straight up through the length of the cylinder, forcing the exhaust gas through the exhaust valve at the top of the cylinder. | _____ |
| c. The filling of the engine cylinder with a supply or charge of fresh air ready for compression. | _____ |
| d. The gas exchange process in which the charge air passes over the piston crown and rises to form a circle within the cylinder, expelling exhaust gases through the exhaust ports cut in the same side of the liner above the scavenge ports. | _____ |
| e. When a large mass of air is supplied to the cylinder by blowing it in under pressure. | _____ |

Ex. 7 Read the text and fill in the missing words in the description of Marine Refrigeration System operation. (Marks ____ / 8)

The refrigerant/ absorbs / increases / turns into / boils / removes / cools / starts
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The refrigerant _____ (1) as a gas and is compressed in the compressor, which _____ (2) its temperature dramatically. Thereafter, the condenser, _____ (3).
 The hot high pressure refrigerant and this way the refrigerant _____ (4) a liquid. Next, the evaporator _____ (5) the refrigerant back to a gas, at a very low temperature. The change from liquid to gas _____ (6) the heat from the evaporator, which in turn _____ (7) the heat from the insulated refrigeration box, thereby lowering its temperature. Hereafter, _____ (8) is returned back to the compressor and the refrigeration cycle starts again.

Ex. 8 RUNNING DIFFICULTIES

You will read a list of running difficulties, some possible causes and their remedies. Fill in the missing words. Use the words in the box. THERE IS ONE EXTRA WORD. (Marks ____ / 7)

Raise, adjusted, fouled, appear, sticking, observed, repair, drain

Possible Cause	Remedy
1. _____ air and gas passages.	Clean the turbine by means of dry cleaning. Clean the blowers and air coolers.
2. Wrongly _____, or slipped, fuel cam.	Check the fuel pump lead.
3. Defective fuel pump suction valve.	_____ the suction valve.
4. Fuel pump plunger or puncture valve _____ or leaking.	Replace the fuel pump or the puncture valve.
5. Oil pressure before fuel pumps too low.	_____ the supply and circulating pump pressures to the normal level.
6. Water in fuel oil.	_____ off the water and / or clean the fuel more effectively.
7. Combustion characteristics of fuel oil.	When changing from one fuel type to another, alterations can _____ in the r /m, at the same pump index.

Ex. 9 Safety in the Engine Room.

Read the following Safety Instructions and fill in the missing words.

(Marks ____ / 5)

Lag / separator / incinerator / contain / insulate

- Properly _____ exhaust manifolds on engines.
- Properly _____ steam pipes and other hot surfaces.
- _____ leakages of fuel and lube oil as soon as possible;
- Use the _____ as per manufacturer guidelines.
- The operation of the bilge water _____ shall be strictly supervised by the Chief Engineer.

Ex. 10 Match the words of column A and B to make appropriate collocations about Engine logbook.

(Marks ____ / 10)

COLUMN A	COLUMN B
1. PSC	a. On board
2. Insurance	b. Reference
3. Garbage	c. Importance
4. Remaining	d. Claims
5. Working	e. Disposal
6. Track	f. Operation
7. of prime	g. conditions
8. at any given	h. inspection
9. for future	i. record
10. bunkering	j. time

Ex. 11 Diesel Engine Troubleshooting and Passenger Care. Match the words to their explanations.

(Marks ____ / 15)

1. respectively	a. faulty
2. seasick	b. assign
3. sluggishness	c. as a second choice
4. hazard	d. accompany
5. defective	e. slow motion, idleness
6. obtain	f. nauseous
7. faltering	g. danger
8. allocate	h. irregular running of the engine
9. exclusively	i. give out
10. distribute	j. concerning
11. preventive	k. get
12. alternatively	l. only
13. escort	m. self- control

14. discipline	n. correspondingly, to the relevant one
15. regarding	o. precautionary

Ex. 12 Read the appropriate response in emergencies related to Fire on Board given by IAMSAR and put them in the correct order. (Marks ____ / 6)

a. Begin procedures for attacking the fire and continue until fire is extinguished.
b. Report location of fire to bridge.
c. Assign the required personnel for fire- fighting.
d. Sound fire alarm.
e. Establish proper communications between bridge and location of fire.
f. Determine the class of fire, the appropriate extinguishing agent and method of attack as well as how to prevent the spread of the fire.

Ex. 13 PART A. Match the terms to their definitions.

(Marks ____ / 14)

1. Attemperator	a. Pipes that carry away liquid waste.
2. condensate	b. supports the whole engine
3. fin stabilizer	c. to fall in drops
4. inject	d. to force liquid into (as by syringe)
5. soot	e. to cause to start
6. windlass	f. to place under water
7. charge	g. drawing in
8. bedplate	h. the liquid collected by the conversion of vapour or gas to liquid
9. drain line	i. to fill up with air
10. drip	j. handling the anchor
11. suction	k. preheats the feeding water
12. submerge	l. apparatus which decreases the temperature
13. economizer	m. Reducing rolling of the ship
14. initiate	n. the impure black carbon particles resulting from the incomplete combustion of a hydrocarbon.

PART B. Choose the correct answer.

(Marks ____ / 13)

- In a 4-stroke Diesel Engine the piston is connected to the connecting rod with the _____.
a. Crank pin b. gudgeon pin c. connection pin
- The parts of a steam reciprocating engine
a. Are similar to those of a two stroke diesel Engine
b. Are completely different from those of a two-stroke Diesel Engine
- In order to lower the boats to the sea we use the steering gear / launching gear.
- Steam changes into water in a compressor / condenser.
- Pumps / cranes are used for loading and unloading liquid cargo.
- To remove water from the machinery space we use a bilge pump / service pump.
- We use the windlass / capstan for pulling in mooring lines.
- Electric fans / generators provide forced ventilation to holds.
- To manoeuvre the ship we use the turning gear / steering gear.
- Centrifugal pumps consist of _____ inside a casing.
a. A ram b. an impeller c. a gear wheel
- A single acting ram pump is a _____.
a. Displacement reciprocating pump
b. Displacement rotary pump
c. Displacement centrifugal pump
- In a _____ pump, the liquid is thrown against the casing of the pump.
a. Gear-wheeled b. centrifugal c. displacement
- In a _____ pump, the vacuum is formed by the teeth on both wheels.
a. Gear-wheeled b. centrifugal c. displacement

TOTAL SCORE: _____ / 125

GOOD LUCK!!!