Merchant Marine Academy of Macedonia- School of Engineers					
Course: Maritime English Academic year:2022-2023 Exam period: June					
Semester: C' Date: 14/06/23	Instructors: A. Birbili, E. Xenitidou				
Student's name:	Student's number:				
Exam paper grade:	Instructor's signature				

Fill in the gaps with a word from the list. There are two (2) extra words. (15 p.)

mixing	atomisers	injurious	drillings	fortified	bunkering
obtained	fenders	particles	distilling	treatment	alongside
transition	suspending	combustion	fractional	eliminate	

	which marine fuels areaccording to their boiling temperature	
distillation.	decorating to their boiling temperature	
	tank is used for the gradual	from HFO to
MDO		
HFO cannot be pressed t	through the injectors without	
	water and dirt	
Lube oils are		
in the	crankshaft take the oil to the crankpin a	nd bottom end bearings.
Sulphur can be very	to engine parts during con	nbustion because it changes
into acid.		
Sediment is formed when	n solid particles in the	fuel coagulate and sink down.
	is the supply of fuel oil for ships.	
A barge equipped with	n, hoses and pumps	, brings the required product
the ship	o for off-loading.	

Match the words to their definitions. There is one (1) extra word. (10 p.)

emission	bunker hose	precise	barge	stalling	sediment
manifold	centrifuge	corrosion	excess	insulate	

- -- disperse through outward movement
- -- oxidation leading to rust
- -- the fuel delivery connection
- -- accurate, exact
- -- discharge of gases, smoke, etc
- -- wrap up, protect against heat or cold
- -- a small tanker which delivers marine fuel oil/lube oil to ships, usually in port
- -- reduction of revolutions, eventual stopping of the engine
- -- flexible tube designed to carry marine fuel
- -- residue

## Fill in the gaps with an appropriate word. The first letter is given. (15 p.)

Marine	fuels con	ne from <b>c</b>	oil.			
			n in the <b>s</b>	tank.		
				ties from the fuel	by means of centr	ifugal
force.			•		•	
Each se	ervice tan	k has the <b>c</b>	to prov	ide the engine with	n fuel for 24 hours.	
				by continuously dr		
bunkering	g operatio	on is called <b>d</b>	samp	ling.		
				djusts the <b>t</b>	of the f	uel in
		ne correct viscosity				
The <b>b</b> _		tank is use	ed to collect the re	circulated fuel oil.		
The bo	oster pun	np increases the <b>p</b>		of the fuel just befo	ore it is delivered t	o the
engine.						
HFO	is much	cheaper than	diesel, but it p	roduces <b>s</b>	and c	dirtier
e		_ gases.				
Are the fo	ollowing	statements True o	r False? (10 p.)			
The use	ed fuel is r	mixed with a new	charge in the settli	ng tank.		
The hig	her the vi	iscosity of a fuel, t	he more heating is	needed to reduce i	it.	
Heavy 1	fuel oil is l	ess viscous than d	liesel oil.			
The hig	her the C	CAI, the earlier the	e ignition takes pla	ce.		
The tim	ne of ignit	ion of diesel oil is	directly influenced	by the cetane num	ber.	
The fue	l needs h	eating when it is c	lose to its pour poi	nt.		
Carbon	deposits	can be formed in	every part of the e	ngine.		
Most fu	uel injecto	ors are operated h	ydraulically.			
The lov	vest part o	of the fuel injector	r is the needle.			
Marine	diesel oil	is mainly used for	manoeuvring and	in ECAs.		
Complete	the text	using the following	ng words: (15 p.)			_
sticking		heat	residues	corrosion	coolant	
mineral		inadequate	friction	performance	consult	
metals		wear	antifouling	sealing	running	
The main	task of lu	brication is to redι	ıce	between the mo	oving parts of an er	ngine.
In this wa	y we ens	ure better	of the	engine and reduction	on of	
due to fri	ction. Lub	orication also acts	as a/an	, because it	absorbs a conside	rable
				tion. Furthermore, i		
				oreover, it protec		
		, even when the e	ngine is out of	, thai	nks to the good ter	nacity
				ps the metal surf		
				ct lubrication of t		
importan	ce becau	se	lubrication w	ould lead to the s	seizing of bearings	s and
		of the engine. The	correct choice of lu	ubricating oil is esse	ntial too, and we s	hould
always		the engine	constructor's man	ual as to the recon	nmended type of a	oil for
the parti	cular eng	ine. The types of	lubricating oils us	ed in marine diese	el engines are gen	erally
		oils, coming from	the	of oil.		

# Choose the correct answer. (15 p.)

It indicates the ignition a. carbon residue	quality of diese b. CCAI		ne number	
It indicates the tendence a. carbon residue	cy of the fuel to b. ash content		leposits during c. aluminium a	
A measure of the densi	ty or weight of t b. specific gravi		c. kinematic vi	iscosity
The lowest temperatur a. pour point	e at which the fo b. cloud		d to flow. c. flash	ı point
The temperature at wh known for safe transport a. pour point		ours ignite wh	en they are ex	posed to a flame. It must be
	•			uel will burn in the cylinders
The acronym CCAI stan a. Calculated Carbon Aro b. Cracked Carbon Atom c. Calculated Carbon Aro	ma Indication Index			
Petrol, diesel, kerosene a. residual fuels	e are refined pet b. distillate fuel		cts. How do we c. intermediat	
Which of the following a. deposit	words is <u>not</u> a s b. froth	ynonym to the	e others? c. sediment	
They allow the lube oil a. pour point dispersants				y pumped. c. flash point depressants
They prevent the corro		rfaces by form	ning a tenaciou	s film on them. They are
a. preventers	ŀ	b. inhibitors		c. improvers
They increase the VI of a. preventers	=	e VI b. detergents		c. improvers
They are used to prote lubrication conditions . T			nd loss of meta	al material during boundary
a. wear preventers		o. anti-oxidan	ts	c. anti- foamants

They are used to keep particle	s of soot and other contaminants	suspended in the oil. They are
a. dispersants	b. depressants	c. detergents
They help to reduce the forma a. anti-oxidants	tion of oil bubbles in the crankcas b. antifouling products	•
Find the correct form of the wo	rd in capital letters.(10p.)	
When HFO cools, it becomes mo	reVISCOSITY.	
Water is highlyCC	RRODE.	
Something that is brought into f	orce or is valid is also	EFFECT.
The HFO purifier separates wate	r and IMPU	RE from the fuel.
AD	D in the lubricating oil improve its	quality.
Empty theCONTA	IN of this box on the floor.	

# Match the following words to form the correct collocations (phrases): There are two extra words (10 p.)

The engineer needed to do some more ......ADJUST in order to fix the injector.

Chemical ......STABLE is an important specification of lube oils.

The bearing was ...... DEFECT and had to be replaced.

The ...... CONSUME of fuel in ships is very costly.

spring	chamber	rate	assembly	tank	seat	
valve	stem	holder	pipe	point	button	
Emergency		drain				
pumping		pressure				
needle		nozzle				
injection		balancing				
return		fuel inlet				



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## Fill in the gaps with a word from the list. There are two (2) extra words. (15 p.)

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obtained	fenders	particles	distilling	treatment	alongside
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in the cr	ankshaft take the oil to the	crankpin and bottom er	nd bearings.
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into acid.			
Sediment is formed when _	solid part	ticles in the fuel coagula	te and sink down
HFO cannot be pressed thr	ough the injectors without		
The process through which			ints of the
tower acc			
distillation.			
A barge equipped with	, hoses and	pumps, brings the requi	red product
the ship for	or off-loading.		
In some cases, a	tank is used for th	e gradual	from HFO to
MDO.			
HFO needs purifying to	water and	d dirt	
Lube oils are	with chemicals.		
Marine		ships.	

#### Match the words to their definitions. There is one (1) extra word. (10 p.)

emission	bunker hose	precise	barge	stalling	sediment
manifold	centrifuge	corrosion	excess	insulate	

- -- a small tanker which delivers marine fuel oil/lube oil to ships, usually in port
- -- disperse through outward movement
- -- oxidation leading to rust
- -- the fuel delivery connection
- -- wrap up, protect against heat or cold
- -- residue
- -- reduction of revolutions, eventual stopping of the engine
- -- flexible tube designed to carry marine fuel
- -- accurate, exact
- -- discharge of gases, smoke, etc

#### Fill in the gaps with an appropriate word. The first letter is given. (15 p.)

			usts the <b>t</b>	of the fuel in
order to provide th				
The <b>b</b>				
Each service tan				
•	• .			awing it throughout the
bunkering operation				
	np increases the <b>p</b> _		of the fuel just befo	ore it is delivered to the
engine.				1. 10. 22
HFO is much che	-	out it produces <b>s</b>	an	d dirtier
e				
Marine fuels con				
Water and thick				
	separates	water and impuriti	es from the fuel by	means of centrifugal
force.				
Complete the text			204402:04	analant
sticking	ined	residues		coolant
minerai	inadequate	Triction	performance	
metals	wear	antitouling	sealing	running
The main tack of lu	ibrication is to radi	160	hotwoon the m	acuing parts of an
The main task of lu	ibilication is to redi	uce	of the engine and	roduction of
engine. In this way	due to friction III	hrication also acts	as a/an	hocause it
				friction. Furthermore,
				loreover, it protects the, thanks to
				e metal surfaces clean
				n of the engine is of
				e seizing of bearings and
				recommended type of
oil for the particula				
generally				
Berreramy	0110, 0011			•
Are the following	statements True o	r False? (10 p.)		
The used fuel is			ng tank.	
The higher the v				t.
5 - 1 - 1	,			

- -- Heavy fuel oil is less viscous than diesel oil.
- -- The higher the CCAI, the earlier the ignition takes place.
- -- The time of ignition of diesel oil is directly influenced by the cetane number.
- -- The fuel needs heating when it is close to its pour point.
- -- Carbon deposits can be formed in every part of the engine.
- -- Most fuel injectors are operated hydraulically.
- -- The lowest part of the fuel injector is the needle.
- -- Marine diesel oil is mainly used for manoeuvring and in ECAs.

## **Choose the correct answer.** (15 p.)

The temperature at which the fuel vapours ignite when they are exposed to a flame. It must be known for safe transport and storage. a. boiling point b. flash point c. pour point  The word shows the quality of fuel and indicates how well a fuel will burn in the cylinders. a. grade b. class c. index  Petrol, diesel, kerosene are refined petroleum products. How do we call them? a. distillate fuels b. residual fuels c. intermediate fuels  Which of the following words is not a synonym to the others? a. sediment b. deposit c. froth  They allow the lube oil to flow at cold temperatures and to be easily pumped. a. pour point dispersants b. flash point depressants c. pour point depressants  It indicates the ignition quality of diesel oil. a. CCAI b. cetane number c. carbon residue  It indicates the tendency of the fuel to form carbon deposits during combustion. a. ash content b. aluminium and silicon c. carbon residue  A measure of the density or weight of the fuel. a. specific gravity b. density c. kinematic viscosity  The acronym CCAI stands for: a. Calculated Carbon Aromaticity Index b. Calculated Carbon Aroma Indication c. Cracked Carbon Atom Index  They prevent the corrosion of metal surfaces by forming a tenacious film on them. They are corrosion	The lowest temperatur a. flash point	re at which the fuel is one b. pour point	bserved to flow. c. cloud	
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corrosion				
<ul> <li>a. improvers</li> <li>b. preventers</li> <li>c. inhibitors</li> <li> They are used to keep particles of soot and other contaminants suspended in the oil. They are</li> <li>a. detergents</li> <li>b. dispersants</li> <li>c. depressants</li> <li> They help to reduce the formation of oil bubbles in the crankcase. They are</li> </ul>			by forming a ter	acious film on them. They are
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	-			

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a. preventers	b. improvers	c. detergents	
,	ct engine parts from friction ar	d loss of metal material durir	g boundary
iubrication conditions . I	hey are		
a. anti- foamants	<ul><li>b. anti-oxidants</li></ul>	c. wear preventers	

#### Find the correct form of the word in capital letters.(10p.)

- The ...... CONSUME of fuel in ships is very costly.
- Chemical ......STABLE is an important specification of lube oils.
- Empty the ......CONTAIN of this box on the floor.
- The bearing was ...... DEFECT and had to be replaced.
- When HFO cools, it becomes more ......VISCOSITY.

Water is highly ......CORRODE.

chamber

- Something that is brought into force or is valid is also ......EFFECT.
- The HFO purifier separates water and ...... IMPURE from the fuel.
- ......ADD in the lubricating oil improve its quality.
- The engineer needed to do some more ......ADJUST in order to fix the injector.

### Match the following words to form the correct collocations (phrases): There are two extra words (10 p.)

assembly

spring	chamber	rate	assembly	tank	seat	
valve	stem	holder	pipe	point	button	
drain				pumping		
pressure				needle		
nozzle				Emergency		
injection				balancing		
return				fuel inlet		

