GUÍA DE ESTUDIOS - TITULACIÓN MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
		FIRE PREVENTION & BASIC FIRE FIGHTING				
1	What action should be taken first when discovering a fire on board?		Activate a fire alarm.	Look for the nearest fire extinguisher.	Go to your cabin and gather your belongings.	Go to your emergency muster station.
2	Which of these fire extinguishing media is preferred to fight a fire in an electrical installation (eg. the main switchboard)?		Foam.	Sprinkler.	Water fog.	Powder.
3	Which of these fire extinguishing media is most effective against an open oil fire?		Powder.	Foam.	Gas.	Water.
4	For fire to occur, which of the following sets of elements must be combined?		Air, earth, and water.	Air, fuel and oxygen.	Conduction, convection & radiation.	Heat, fuel and oxygen.
5	Which side of the fire triangle most commonly causes a fire?		The introduction of fuel.	The introduction of oxygen.	The introduction of air.	The introduction of heat.
6	If heat is removed from the fire triangle, what is this called?		Cooling.	Wetting.	Smothering.	Starving.
7	If fuel is removed from the fire triangle, what is this called?		Cooling.	Starving.	Smothering.	Suffocating.
8	On fires involving burning liquids, which of these extinguishers is considered most effective?		Water.	Dry Powder.	Foam.	CO2.
9	Which of these portable fire extinguishers are found on the Bridge, in the Radio Room and in the Engine Control Room, because they are extremely effective with fires involving live electrical and electronic equipment?		Carbon Dioxide (CO2).	Foam.	A.F.F.F.	Dry Chemical - Dry Powder.
10	Which of these extinguishing agents is it best to use on a fire involving a burning cabin that had been electrically isolated ?		Carbon dioxide (CO2).	Dry Powder - Dry Chemical.	Foam.	Water.
11	What setting are these firefighters use on their nozzle?		Jet.	Stream.	Fountain.	Spray.
12	If oxygen is removed from the fire triangle, what is this called?		Cooling.	Blowing.	Smothering.	Starving.
13	What would you do if someone's clothes catch fire?		Go and find a fire hose.	Smother the flames with a blanket or jacket.	Telephone the bridge.	Shout for help while getting the first aid kit.
14	How do you direct a fire nozzle under full water pressure?		Direct the nozzle horizontally.	Direct the nozzle slightly upwards.	Direct the nozzle slightly downwards.	Direct the nozzle vertically.
15	What item of fire extinguishing equipment, usually found in the galley, is particularly effective on fires involving hot cooking oil?		A fire blanket.	A bucket of water.	A water filled extinguisher.	A fire hose.

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FIRE PREVENTION & BASIC FIRE FIGHTING						
16	What alarm signal is sounded by the ship's alarm bells in the event of fire onboard?		A series of 5 long rings.	A series of 5 short rings.	One long ring followed by seven short rings.	Continuous ringing of the bell.
17	What does this sign mean?		Flammable.	Explosive.	Radioactive.	Dangerous gas.
18	When using a carbon dioxide fire extinguisher, the discharge should be directed...		to the centre of the fire.	at the base of the fire.	downwind of the fire.	at the top of the fire, then working down.
19	You find a fire in the crew's accommodation. The first thing you should do is....		ring the fire alarm.	call the bridge and give the fire location.	attempt to put the fire out yourself with a water-filled extinguisher.	wake everyone in the accommodation.
20	During extremely cold weather conditions, what must be done to fire mains on deck to keep them from freezing?		Drain out the water and fill them with anti-freeze.	Wrap them with electric heat lines.	Open the steam injection system.	Drain them and post notices to inform everyone.
21	A fuse that blows should be replaced with a fuse of.....		the recommended current and voltage rating.	higher current and higher voltage rating.	higher current and lower voltage rating.	lower current and higher voltage rating.
22	When you are fighting a fire in an enclosed space, you should keep low, primarily in order to....		allow heat, flames, smoke, and steam to pass above you.	avoid stumbling or hitting your head.	keep control of the fire hose.	allow the chief of the firefighting party a clear view.
23	How should deck fire hoses be stowed?		Flaked out in accessible boxes, with the nozzles connected.	Tightly coiled in boxes, with the nozzles stowed separately.	Flaked out in locked red metal boxes.	Loosely coiled in a dry place in the forepeak stores.
24	The switch isolating all the power to electrical equipment is called a....		reset.	generator.	transformer.	breaker.
25	Another term or word for combustion is....		injection.	detonation.	atomisation.	burning.
26	What kind of portable light should be used in an empty hold which has carried grain or coal?		A cargo cluster.	A battery-powered, explosion proof light.	An electric light with a properly grounded electrical cord.	An electric light which is fitted with a safety guard to prevent the bulb from being broken.

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Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
FIRE PREVENTION & BASIC FIRE FIGHTING						
27	What should you do if a pan of fat or cooking oil catches fire in the galley?		"Pour it down the nearest drain."	Tip a bucket of water over it.	Cover it with a fire blanket.	Spray it with a carbon dioxide extinguisher.
28	What is a "flammable mixture"?		A mixture of substances which cannot catch fire.	Any mixture that can ignite on its own.	A mixture that has large amounts of vapour but few oxygen molecules.	A mixture that has vapour and oxygen in sufficient quantities to ignite.
29	What is the danger of static electricity?		It is electricity that comes from lightning and therefore is very powerful.	It is electricity that comes from a battery and may discharge it without you knowing.	It can cause a spark even when no electrical power is connected.	There is no danger from static electricity.
30	What do we call the temperature at which a material produces enough flammable vapour for it to flash if exposed to an ignition source?		"The auto-ignition temperature."	The melting point.	The flashpoint.	The ignition temperature.
31	Dry chemical fire extinguishers put out a fire by....		cooling.	removing the oxygen.	removing the fuel.	interrupting the chemical reaction.
32	Which of the following faults would you consider less serious on a fire hydrant?		Valve handle missing.	Not greased.	No hydrant cap fitted.	Leaking.
33	When you use a foam extinguisher on a fire, how is the fire extinguished?		Its source of ignition is removed.	It is smothered.	It is cooled down.	It is washed away.
34	For what purpose would you use a fine water spray when fighting a fire?		To prevent flames from advancing.	To soak burning bedding.	To break up the burning material.	To extinguish a fire at long range.
35	Which of these is NOT likely to cause a spark?		Dropping a steel wrench down a cargo tank.	Steel striking another piece of steel.	Steel striking against iron.	Dropping a rubber mallet down a cargo hatch.
36	Foam extinguishes a fire by....		removing the oxygen.	cooling.	interrupting the chemical reaction.	removing the fuel.
37	Why is it a bad idea to use a solid stream of water on an oil fire?		It can damage equipment in the area of the fire.	It will not cool the fire efficiently.	It will stir up and spread the fire.	It builds up too much pressure in the fire main system.
38	What sort of flashlights (or torches) can be used on a tanker?		Waterproof flashlights.	Regular tightly sealed flashlights.	Intrinsically safe flashlights.	Water-cooled flashlights.

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	FIRE PREVENTION & BASIC FIRE FIGHTING					
39	When would you adjust a fire hose nozzle to provide a solid stream of water?		To extinguish flames at long range.	To break up a pool of burning oil.	To prevent flames from advancing.	To cool a surface adjacent to the fire.
40	The most common cause of spontaneous combustion fires is....		not cleaning oil tanks properly.	ash trays not being emptied often enough.	not disposing of oily rags properly.	smoking in unauthorised places.
41	What is the first thing you should do if you find an electrical fire?		Find the cause of the fire.	Shut off the electrical current, if possible, then ring the alarm.	Use a carbon dioxide extinguisher.	Call the bridge, naming the piece of equipment.
42	What percentage of the air we breathe is actually oxygen?		21%	10%	16%	5%
43	Carbon dioxide used as a fire fighting agent....		is lighter than air.	is heavier than air.	has the same weight as air.	disperses quickly in air.
44	When fighting a fire, you should (if possible) approach the fire from....		a number of directions.	windward.	leeward.	two directions at once.
45	A universal pipe fitting used to connect the vessel to a shoreside water main in any country is called....		a fire safety adaptor.	an international shore connection.	a fire system regulator.	a stand pipe valve.
46	What should you use to reduce the amount of heat being given off by a fire?		Water.	Foam.	Dry chemicals.	Sand.
47	If a water leak develops above an electric motor, what action would you take?		Wrap a sheet of plastic around the motor.	Stop the motor and repair the leak.	None: marine electric motors are water proof.	Inform the duty engineer.
48	What are carbonaceous fuels?		All low-flash liquids are referred to as carbonaceous fuels.	Hydrocarbon products carried on tankers which were derived from metamorphic rock formations.	Ordinary combustible materials such as wood, paper, cloth: those materials which burn to leave behind smouldering embers.	Flammable gases under pressure in pipes, tanks or cylinders which can create a risk of explosion when temperature/pressure controls fail.
49	What is a "hot work" permit?		A permit allowing seafarers to work on deck under direct sunlight.	A permit allowing galley staff to start up the galley equipment.	A permit allowing engineers to fire up the main boiler.	A permit issued when laid down procedures controlling hot work are in place and obeyed.

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Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
FIRE PREVENTION & BASIC FIRE FIGHTING						
50	What type of extinguisher is most suitable for dealing with fires involving carbonaceous materials?		Carbon Dioxide extinguisher.	Dry powder extinguisher.	Foam extinguisher.	Water extinguisher.
51	What would you consider to be your most important reaction on discovering a fire?		Closing doors and windows to remove the air supply.	Tackle the fire with the nearest fire extinguisher.	Find the seat of the fire.	Report it by raising the alarm.
52	The fixed installation system can control a fire within a short space of time. Why should the CO2 (Carbon Dioxide) fixed installation system be used with caution in confined areas?		It will increase the oxygen present in the confined area to a dangerous level.	It may not necessarily operate effectively.	It may explode when exposed to heat.	As it reduces the amount of oxygen, the engine room has to be evacuated.
53	All fire fighting features are there to protect the vessel and its crew. What in your view is the most important measure one can take to maintain their effectiveness?		Overhaul of the fire fighting equipment each time the vessel is in dry dock.	Appointing a safety officer with responsibility for maintenance and testing.	Maintaining the validity of the vessel's Safety Management Certificate as required under the SOLAS regulations.	Regular inspection, maintenance and testing.
54	Dry powder extinguishers suppress a fire by chemically interfering with the process of combustion. Complete the sentence - A dry powder extinguisher acts as:		a flame inhibitor.	a cooling agent.	a smothering agent.	a means of fuel starvation.
55	Spontaneous combustion may occur when:		a person smokes in bed and the lighted cigarette falls out of his/her hand as they fall asleep.	sparks escaping from the funnel or other engine exhaust, set fire to materials left lying about on deck.	incorrect procedures are followed in the sequence of lighting a boiler.	dirty waste, rags, sawdust and other rubbish, especially if contaminated by oil, are left lying about.
56	The machinery spaces contain all the elements needed to start a fire and sustain it. What are these elements?		Fuel, water and flame.	Air, oily rags and heat.	Heat, air and fuel.	Fuel, air and waste bins.
57	In fire-fighting, what does the term "boundary starvation" refer to?		Closing doors and hatches at the boundary of a fire.	Cooling the area around a fire to stop it spreading.	Removing the fuel from the boundary of a fire to stop it spreading further.	Mustering fire fighters and materials in the area near the fire.

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Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
FIRE PREVENTION & BASIC FIRE FIGHTING						
58	The hazard presented by a liquid is usually classified according to its flashpoint. How is flashpoint defined?		It is the temperature at which a liquid gives off vapours.	Flashpoint is the highest temperature at which vapour is given off in sufficient quantity for there to be a flash if a spark or flame is introduced.	Flashpoint is the lowest temperature at which vapour is given off in sufficient quantity for there to be a flash if a spark or a flame is introduced.	The total amount of heat energy which could be released within a compartment if all the potential fuel was burned.
59	What is the most sensible approach to gain control of an engine room fire?		Evacuate the engine room without delay and release the fixed installation.	Co-ordinate fire fighting efforts by effective Command and Control. The most sensible approach is "one shot and out".	Monitor the spread and intensity of the fire for a few minutes before deciding best action.	Instruct everyone to go to their muster stations.
60	Any fire on board poses a threat to the safety of the ship and crew. What type of fires are the biggest, single, reason for the total loss of ships and their cargo?		Fires which break out in containers.	Fires which break out on tankers.	Fires which break out in machinery spaces.	Fires which break out in the accommodation block of any vessel.
61	What, if any, precautions need to be taken before welding in the vicinity of open, but empty, hatches?		No special precaution are necessary when welding in the vicinity of empty hatches as long as loading operations have not started.	Screens should be erected to prevent sparks dropping down hatches or ventilators. Combustible materials should be moved to a safe distance.	Issue a "cold work" permit.	Obtain permission from the harbour authorities and company head office.
62	In the list of actions below, which item does NOT belong? Before using a fixed CO2 (Carbon Dioxide) installation:		sound the fire alarm.	evacuate the area.	take a roll call to make sure no-one is left there.	open all doors.
63	When planning to stop a fire spreading, one must never forget that:		you must take into account the areas above and below the fire, as well as on all four sides.	all visitors must be warned of the non smoking rules.	high flashpoint liquids are a source of danger.	appropriate safety notices are posted in all necessary languages.

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FIRE PREVENTION & BASIC FIRE FIGHTING						
64	The hazard presented by a liquid is usually classified according to its flashpoint. How is flashpoint defined?		It is the temperature at which a liquid gives off vapours.	Flashpoint is the highest temperature at which a vapour is given off in sufficient quantity for there to be a flash if a spark or flame is introduced.	Flashpoint is the lowest temperature at which vapour is given off in sufficient quantity for there to be a flash if a spark or flame is introduced.	The temperature at which fuel will spontaneously ignite.
65	Ideally the adjustable jet/spray nozzle on a hose should be used as:		a jet.	a spray of arc 30 degrees.	a spray of arc 60 degrees.	a spray of arc 90 degrees.
66	Why is the risk of a fire in the engine room potentially so great?		Because it is a hot place.	Because fuel tanks are located in the engine room spaces.	Because it contains air, fuel and heat.	Because ventilators are constantly supplying fresh air.
67	Is there a connection between "good housekeeping" and fire prevention on board ship?		No, the two are not related.	Yes, good housekeeping is an important element in the fire prevention check list on board ship.	No, it is not related to a potential heat energy source.	Rubbish is not a problem as long as it is kept neatly together on board your ship in the MARPOL containers provided.
68	Which extinguisher methods are electrically conducting?		CO2 (Carbon Dioxide).	Dry powder.	Water/foam.	Fire blanket.
69	When dealing with a fire emergency you should follow the advice of: Find it; Isolate it, Report it and Extinguish it. What does the term ISOLATE IT mean?		To withdraw all personnel from the fire area.	To stem the flow of any fuel to the fire.	To send in the emergency response party.	To tackle the fire with an extinguisher.
70	Many things can create the heat necessary to create a fire. Of the examples given below, which item does NOT belong?		Painted surfaces	Friction	Electrical energy	Chemical reactions
71	What do the words "starvation", "smothering" and "cooling" refer to in relation to fire fighting?		They are the words describing various fire detection systems.	The means to remove one or more of the three elements of combustion.	The conditions under which a fire may start.	The names of fire fighting equipment.
72	After a fire has been extinguished, precautions should be taken against:		electrical short circuits.	burns from hot embers.	flooding of the space.	its spontaneous re-ignition.

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FIRE PREVENTION & BASIC FIRE FIGHTING						
73	If a space is filling with smoke and fumes, any personnel not properly equipped with breathing apparatus should...		get out of the space without delay; if necessary by crawling on hands and knees.	raise the alarm, look for the nearest fire extinguisher, and take immediatefire fighting action.	search for others who may be in urgent need of assistance.	close all doors and portholes before making an escape from the area.
74	If, after hearing the fire alarm in the engine room, you cannot see smoke or flames you should:		switch off the false alarm and remember to re-set the alarm system.	inspect the alarm system and try to repair it.	follow fire emergency procedures.	release the fixed fire fighting smothering system.
75	Complete the following sentence. The design of a ship's fire fighting installation will provide sufficient power for...		one water jet to reach any part of the vessel normally accessible to the crew.	two water jets to reach any part of the vessel normally accessible to the crew.	three water jets to reach any part of the vessel normally accessible to the crew.	four water jets to reach any part of the vessel normally accessible to the crew.
76	What is the basic principle of fire prevention?		Never to smoke in bed.	Remove one of the three components of the "fire triangle."	Keep all spaces well ventilated throughout the vessel.	To make an inspection of the vessel on completion of your period on duty.
77	What are the three elements found in the "FIRE TRIANGLE"?		Fuel, water and flame.	Air, flame and heat.	Fuel, air and heat.	Fuel, air and flame.
78	Ships are designed with safety in mind. The aim is threefold and includes the design features listed below. Which feature does NOT belong?		To reduce the likelihood of fire starting by installing flame-proof fittings.	To include essential supplies of heat, fuel and air.	To prevent fires from spreading through vent closures.	To provide methods and systems to contain and extinguish a fire.
79	What is the danger associated with thick smoke?		Fire fighting extinguishers are less efficient.	Flames spread faster in a smoke filled area than in clear air.	Fixed fire fighting installations can't be used.	It is easy to lose your bearings and move closer to danger rather than away from it.

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FIRE PREVENTION & BASIC FIRE FIGHTING						
80	Why should a CO2 (Carbon Dioxide) extinguisher be used with caution in confined areas?		It will increase the oxygen present in the confined area to a dangerous level.	It will not operate effectively in confined areas.	It may explode when exposed to heat.	It will displace the air and reduce the amount of oxygen available.
81	Why should a CO2 (Carbon Dioxide) extinguisher be used with caution in confined areas?		It will increase the oxygen present in the confined area to a dangerous level	It will not operate effectively in confined areas	It may explode when exposed to heat	It will displace the air and reduce the amount of oxygen available
82	For fire to occur, the three elements found in the "Fire Triangle" must be present. These are heat, air and....		fuel	flame	electricity	spark
83	What type of extinguisher is most suitable for dealing with fires involving carbonaceous materials?		CO2 (Carbon Dioxide) extinguisher	Dry powder extinguisher	Foam extinguisher	Water extinguisher
84	What should you do if a pan of fat or cooking oil catches fire in the galley?		Pour it down the nearest drain	Tip a bucket of water over it	Cover it with a fire blanket	Spray it with a CO2 extinguisher
85	If you discover a fire, what is the most important action to take?		Close doors and windows to remove the air supply	Tackle the fire with the nearest fire extinguisher	Find the seat of the fire	Report it by raising the alarm
86	What is the basic principle of fire prevention?		Never to smoke in bed.	Remove one of the three components of the "fire triangle."	Keep all spaces throughout the vessel well ventilated.	Inspect the vessel at the end of each watch.

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FIRE PREVENTION & BASIC FIRE FIGHTING	
ANSWERS	
1	A
2	D
3	B
4	D
5	D
6	A
7	B
8	C
9	A
10	D
11	D
12	C
13	B
14	C
15	A
16	D
17	A
18	B
19	A
20	D
21	A
22	A
23	A
24	D
25	D
26	B
27	C
28	D
29	C
30	C
31	B

GUÍA DE ESTUDIO MAQUINISTA NAVAL	
FIRE PREVENTION & BASIC FIRE FIGHTING	
ANSWERS	
32	C
33	B
34	A
35	D
36	A
37	C
38	C
39	A
40	C
41	B
42	A
43	B
44	B
45	B
46	A
47	D
48	C
49	D
50	D
51	D
52	D
53	D
54	A
55	D
56	C
57	C
58	C
59	B
60	C
61	B
62	D

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FIRE PREVENTION & BASIC FIRE FIGHTING	
ANSWERS	
63	**A**
64	**C**
65	**C**
66	**C**
67	**B**
68	**C**
69	**B**
70	**A**
71	**B**
72	**D**
73	**A**
74	**C**
75	**B**
76	**B**
77	**C**
78	**B**
79	**D**
80	**D**
81	**D**
82	**A**
83	**D**
84	**C**
85	**D**
86	**B**

GUÍA DE ESTUDIO MAQUINISTA NAVAL
FIRE PREVENTION & BASIC FIRE FIGHTING
ANSWERS