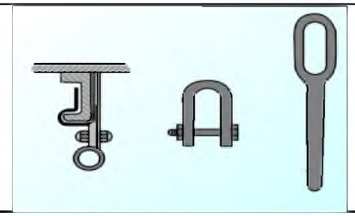
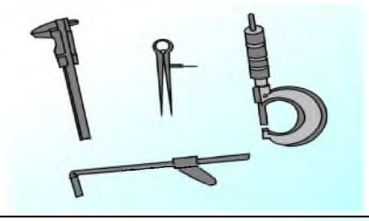
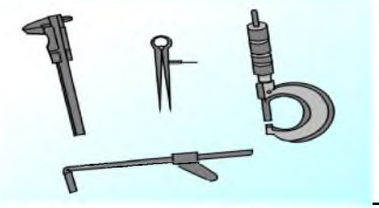
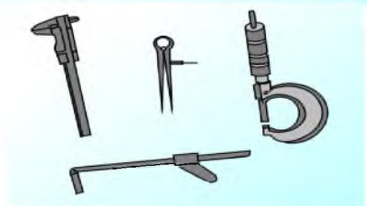
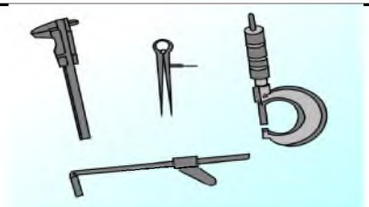
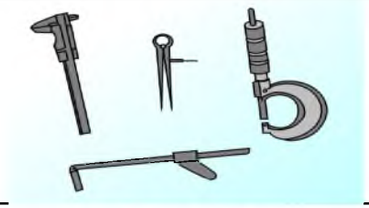
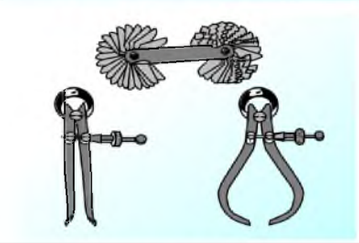
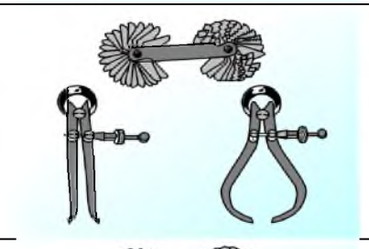
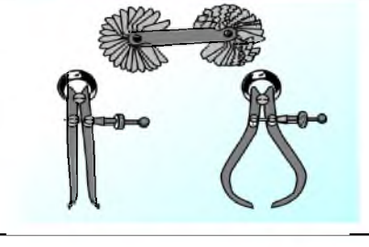
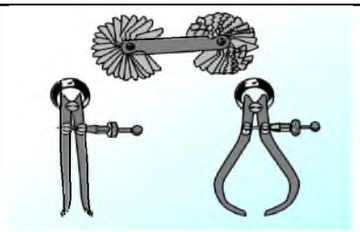
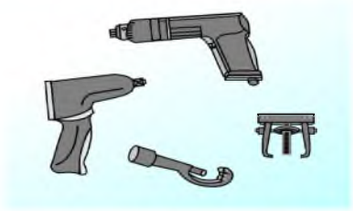
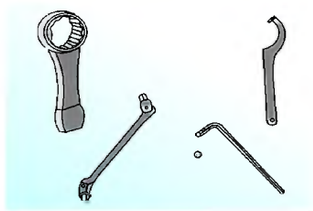
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
1	What is the fastening device shown at the left side of the drawing ?		A beam clamp.	An angle iron fastener.	A frame clamp.	A support fastener.
2	What is the measuring instrument shown on the left top ?		An outside calliper.	An outside pipe calliper.	A Dornier calliper.	A Vernier calliper.
3	What is the accuracy of the measuring instrument shown on the top left ?		1/10th to 1/20th millimetre	1/20th to 1/25th millimetre	0.1 to 0.5 millimetre	0.1 to 0.25 millimetre
4	Suppose you need to draw a circle of 186 mm diameter on metal or on a packing sheet. How would you do this using the compass shown top centre ?		Measure 186mm on packing, draw 2 lines through the centre.	Set opening of compass legs to 93 mm using a steel ruler.	Indicate straight line with points 0mm, 93mm and 186mm on packing.	Project first a hexagon on packing or steel plate.
5	What is the accuracy of a micrometer shown top right ?		0.1 to 0.2 millimetres.	0.1 to 0.5 millimetres.	0.01 to 0.005 millimetres.	0.05 to 0.01 millimetres.

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
6	What is the measuring device shown at the bottom ?		A tracing instrument.	A right angle plane tracer.	An angular tracer.	A 90 degree angle projector.
7	What is the measuring device shown in the top and what is it used for ?		A thread gauge. To measure thread size on bolts and studs.	A bolt thickness gauge. To measure the size of bolts.	Thread thickness gauge. Measure clearance of bolts and nuts.	Thread wear down gauge. Measures wear-down on bolts / nuts.
8	What measuring device is shown in the bottom left corner ?		A pipe calliper.	An inside tracer.	An adjustable inside calliper.	A bore calliper.
9	What is the purpose of the calliper shown in the bottom left corner ?		Measuring piston ring gaps.	Measuring fuel pump lifts.	Measuring inside diameters of hydraulic pipes.	Measuring inside diameters or gaps.

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
10	What is the measuring device shown in the right bottom corner ?		A flange calliper.	A pipe calliper.	An adjustable pipe calliper.	An adjustable outside calliper.
11	How will the tool shown at the top be powered if it is to be used on tankers ?		By battery power, 12 Volt maximum.	By AC power 110 Volt, 60 Hz maximum.	By compressed air 8.5 kg/cm2 maximum.	By compressed air 3.5 kg/cm2 maximum.
12	For what are RECOIL-LESS HAMMERS used ?		To assemble tight fitting parts.	To chisel deep grooves in metal.	To hammer on ring spanners.	To test the foundation bolts of engines.
13	What kind of tool is shown top left and for what is it used ?		A ratchet spanner / Used on main engine piston crowns.	A torque spanner / Used on foundation bolts.	A forged torque spanner / Used to hammer nuts.	A forged ring spanner / Used to be hammered by a sledgehammer.

GUÍA DE ESTUDIO- TITULACIÓN MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
14	What is the tool shown upper right ?		A bearing cap-wrench.	A purifier assembly wrench.	An orifice removal wrench.	A hydrant wrench.
15	What tool is shown bottom left and for what is it used ?		Articulated socket wrench/ Out of centre extension.	Square ratchet wrench / 45 degree out of line wrench.	Flexible socket spanner / For sunken nuts removal and fitting.	Flexible ratchet wrench / As extension for ratchets.
16	What kind of tool is shown right bottom and into what does it fit ?		A bar wrench / It fits into exhaust gas pipe fastening bolts.	An angle wrench / It fits into cylinder cover plugs.	A socket bolt wrench / It fits into Allen Bolts (Allen keys).	A torque wrench / It fits over nuts.
17	What kind of wrench is shown upper left ?		An adjustable spanner.	A spring wrench.	A Stillwell adjustable wrench.	A Stilson wrench.

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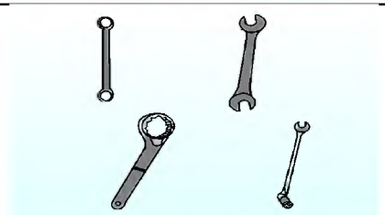
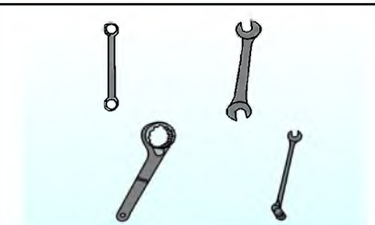
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
18	What kind of tool is shown upper right ?		A Stilson wrench.	A pipe wrench.	An adjustable nut wrench.	An adjustable vice grip wrench.
19	What is the tool shown bottom left ?		A ratchet spanner.	A flexible ring spanner.	A forged flexible star-spanner	A torque ring spanner.
20	What kind of tool is shown top right ?		A star spanner, double forged.	A mechanic's spanner.	A common bolt spanner, double forged.	A double ended open jaw spanner.
21	What is the tool shown top left ?		A flat mechanic's double spanner.	A double ended ring spanner.	A double flat spanner.	A forked double spanner

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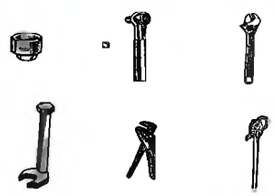
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
22	What kind of tool is shown bottom left ? How can it be extended ?		A star spanner / Extended by torque bar.	An open spanner / Cannot be extended.	A double hexagon spanner / Extended by rod.	A single ended ring spanner / Extended by a pipe or tube.
23	What kind of tool is shown bottom right bottom ?		A combined open ended spanner and socket wrench.	A flat ratchet spanner.	A socket wrench forked spanner.	A single ended forked ratchet wrench.
24	What kind of assembly does the upper left piece and the upper centre piece make ?		A socket wrench assembly.	A ratchet spanner.	A ratchet lever assembly.	A ratchet torque assembly.
25	What kind of tool is shown on the bottom left corner of the picture and when is it used ?		A rod spanner / For cylinder cover tightening.	An extended spanner / When the nut is found frozen.	A hexagon fork spanner. / To apply extra force when tightening.	A pinchbar spanner / When there is no side space available.
26	What kind of tool is shown bottom centre ?		An adjustable pocket spanner.	A pipe wrench.	A shifting spanner.	A Stilson wrench.

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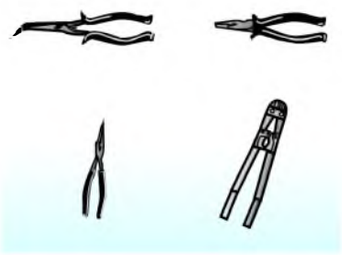
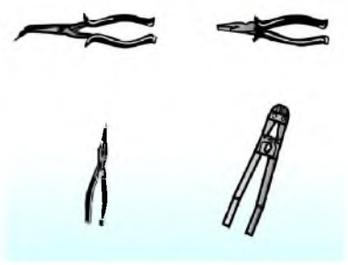
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
27	On what equipment should the wrench shown bottom right be used ?		On bolts and nuts.	On broken studs.	On large diameter pipes and shafts.	On electric motor couplings.
28	The tools shown here are .....?		engineer's tools.	electrician's tools.	duty engineer's and watchkeeper's control room tools.	welder's tools.
29	What is the tool shown top left called and by whom is it mostly used ?		Welding rod pliers / fitters and welders.	Manometer curved pliers / engineers.	Instrument long nose pliers / Automation and control engineers.	Curved long nose pliers / Electricians.

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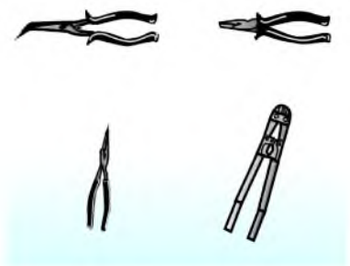
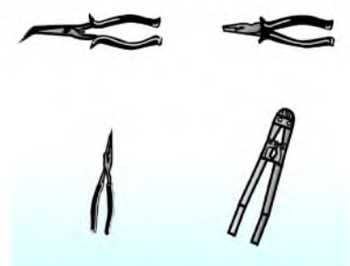
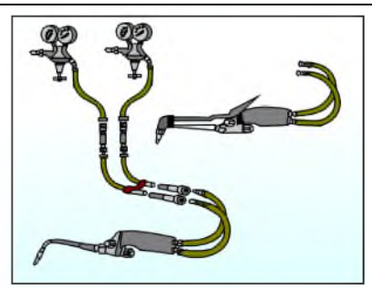
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
30	What is the tool shown top right and by whom is it used ?		Combination pliers / For general use.	Electrician's pliers / By the electrician.	Mechanical pliers / By the engineers and fitters.	Flat nose pliers / By the electrician.
31	What is the tool shown bottom left and by whom is it used ?		Inside circlip pliers / By engineers.	Outside circlip pliers / By engineers.	Round point pliers / By electricians.	Eye nose pliers / By the electrician.
32	What kind of tool is shown bottom left ? What is its use ?		Mason's chisel / To break up cement boxes.	Blacksmith's chisel / To cut steel bars and rods.	Hot chisel / To cut bolts and nuts.	Cold chisel / A general purpose cutting and splitting tool.
33	If the welding torch and the oxygen/acetylene pressure regulators are fitted in the engine room workshop, to what should they be connected ?		The oxygen and acetylene bottles.	Oxygen and acetylene pipe lines.	Gas bottles depending the material to weld.	Safety valves.

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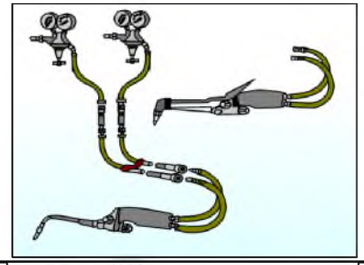
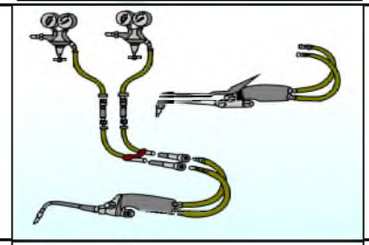
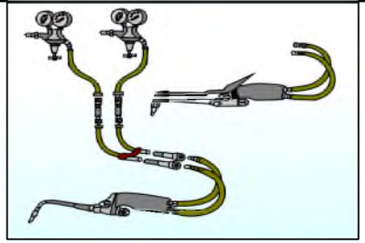
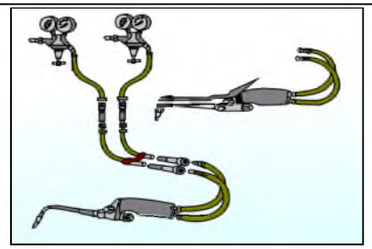
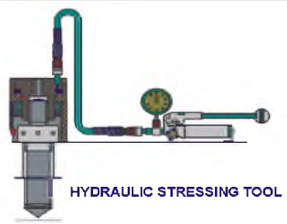
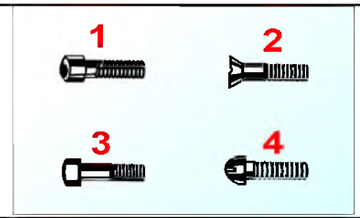
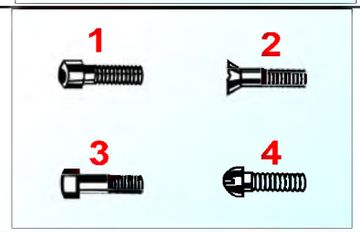
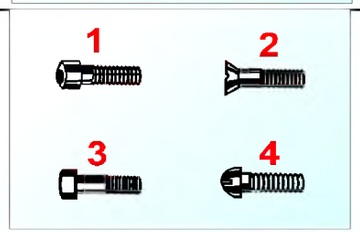
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
34	When igniting the welding torch, how would you proceed ?		Open acetylene, ignite, than adjust flame with oxygen.	Open oxygen and acetylene, than ignite	Open acetylene, ignite, open oxygen than adjust flame	Ignite whilst controlling acetylene, open oxygen, adjust flame
35	What is the gas welding equipment shown right side ?		A heavy duty welding torch.	A blow-by torch.	A cutting torch.	An illumination torch.
36	How should oxygen and acetylene bottles be transported. ?		In a safety net, well secured..	In a special provided stand with clamps.	With the caps secured by gas-tight tape.	In an upright position.
37	Depending on the plate thickness to be cut you should increase .....?		the acetylene flow.	the oxygen flow.	the oxygen and the acetylene flow.	the nozzle size.

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
	USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR					
38	If you are welding in the workshop, you must ensure in advance that the bridge is told and that		the Chief Engineer is informed as well.	the emergency fire pump is started.	the fire extinguishers of the engine room platform are not expired.	the fire alarm for the workshop platform is switched off.
39	What is the function of this hydraulic stressing tool when fastening and unfastening bolts/nuts on an engine ?	 HYDRAULIC STRESSING TOOL	To fasten or unfasten the nut.	To press the part to be fastened together or down so that the nut can be tightened by hand.	To apply pressure on cylinder head or bearing so that the bolts/nuts can be tightened by hand.	To elongate the bolts at required stress value so that the nuts can be tightened to the position to ensure correct pre-tensioning.
40	The "scleroscope" is used to determining		the "hardness " of a metal..	the "thickness" of a metal.	the "brittleness" of a metal.	the existence of cracks in metal.
41	Which of these four screws is a fillister head screw ?		No 1	No 2	No 3	No 4
42	What type of screw is No. 2 ?		A hexagon head screw.	A button head screw.	A flat head screw.	A fillister head screw.
43	What type of screw is No. 3 ?		A button head screw.	A hexagon head screw.	A fillister head screw.	A flat head screw.

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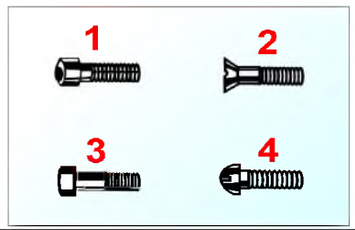
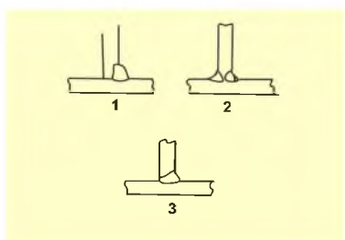
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
44	What type of screw is No. 4 ?		A hexagon head screw.	A fillister head screw.	A flat head screw.	A button head screw.
45	For cutting hard materials, metal saws with ..... blades should be used ?		large pitch.	small pitch.	sharp angle teeth.	dual angle teeth.
46	When starting to tap a hole, how is the process checked for perpendicularity?		By sighting.	By spirit level.	By try square.	By straight edge.
47	What general name is given to files which remove maximum metal in the shortest time?		Single cut.	Draw file.	Double cut.	Bastard.
48	The figure shows welded tee joints. What preparation is required for No.2 ?		Single bevel	Double bevel	Double V	Double U
49	When fitting new bottom ends to a small diesel engine, the bottom end bolts have no locking devices. Which of the following should be fitted.		Taper pins	Bifurcated taper pins	Parallel pins	Split pins

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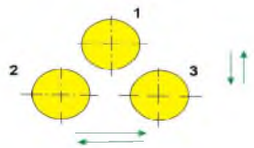
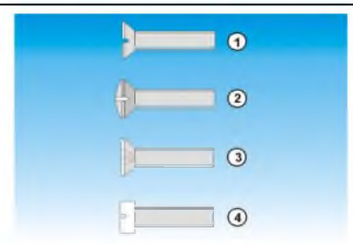
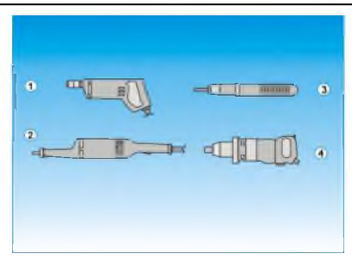
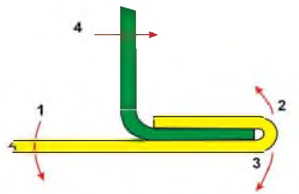
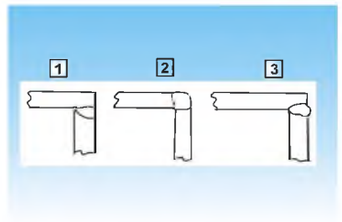
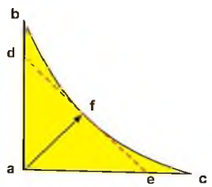
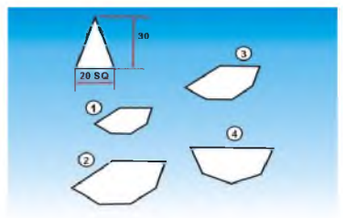
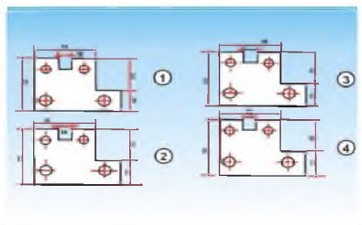
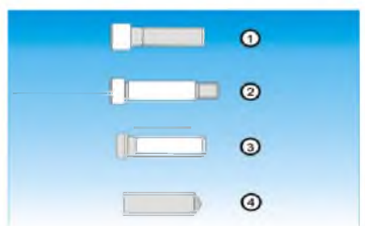
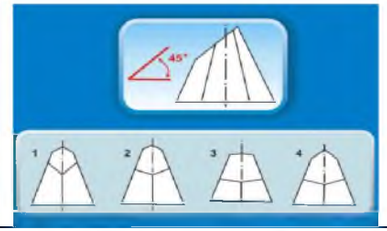
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
50	The sketch shows the rollers for a pyramid rolling machine. Which is the idler?		No.1	No.2	No.3	No.4
51	What device is fitted to prevent component gases mixing in hoses?		A relief vale.	A stop valve.	A by-pass valve.	A hose check valve.
52	The diagram shows four types of machine screws. Identify the cheese head screw.		No.1	No.2	No.3	No.4
53	Identify the powered hand tool No. 2 ?		Drill	Grinder	Screwdriver	Input wrench
54	Perspex is an example of a thermoplastic, How is this best heated prior to bending?		Heat in an oven.	Heat in boiling water.	Flame heat.	Hot air stream.

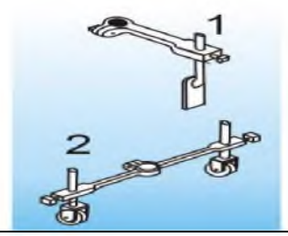
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
55	It is required to make a drip tray. What machine would be used?		Powered brake press.	Rolling machine.	Hand operated folding machine.	Nibbler.
56	In readiness for use, a good scraper would have it's cutting edges?		Ground Oil stoned Highly tempered	Ground Oil stoned Lightly tempered	Honed Sand stoned Highly tempered	Polished Sand stoned Lightly tempered
57	A method of joining two plastics together is by solvent welding. What is this process?		Application of a thin film of adhesive to joining surfaces.	Adhesive is applied and dissolves the plastic material being joined.	A heating tool is applied with pressure to required join.	A high frequency current is applied to clamps at the join.
58	When gas cutting a mild steel plate, what does the size of nozzle used depend upon?		Thickness the of plate	The gases used	Impurities in the material	Gases remaining in the cylinder
59	The sketch shows a partially completed knocked up joint made from 0.5 mm plate. Which direction of bending completes the joint?		No.1	No.2	No.3	No.4
60	.A short box girder is fabricated from 8 mm steel plate. What edge preparation is required for No.2 ?		None.	Single bevel Closed corner.	Double bevel closed corner.	Double U.
61	Welding fumes can be dangerous. When welding in the workshop how is welding rendered safe?		By respirator.	By extraction.	By ventilation.	By extractor welding gun.

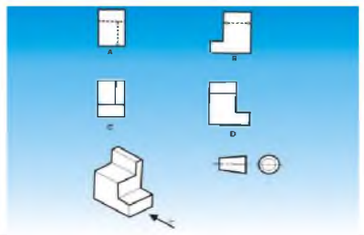
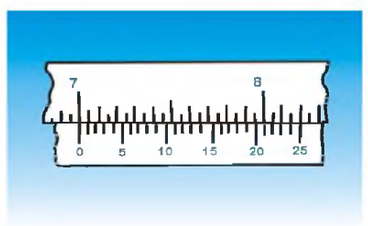
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
62	Which set of equipment is required to mark out the keyway of a 30 mm diameter shaft?		Porthole glass Slip gauges Scriber Dividers	Dial gauge Vee block Dividers Vernier protractor	Polish flat bar Slip gauges Scriber Engineer's square	Surface plate Vee block Vernier height gauge Dividers
63	A blind hole in a valve casing requires to be tapped 12 mm. Which tap(s) would be used?		Plug.	Second and plug.	Taper and plug.	Taper, second and plug.
64	For the fillet weld shown, what is the throat length?		ad	ae	Db	af
65	A crankcase weld requires detailed inspection while on passage. How would this be carried out?		By x-ray.	Visually.	By dye penetrant.	By magnetic particle.
66	Which gas is NOT commonly used as a fuel when cutting steel plate?		Propane.	Acetylene.	Natural gas.	Helium.
67	When bonding together two metal components, what is the correct sequence?		Clamp together. Add activator to epoxy resin. Apply to edges removing surplus. Remove surplus.	Add activator to epoxy resin. Clamp together. Add activator to epoxy resin. Clamp together. Apply to edges and allow to cure	Clean and rough surfaces. Add activator to epoxy resin. Apply to surfaces and Clamp together.	Clean and rough surfaces, Add activator to epoxy resin. Apply to surfaces and Clamp together only when tacky.

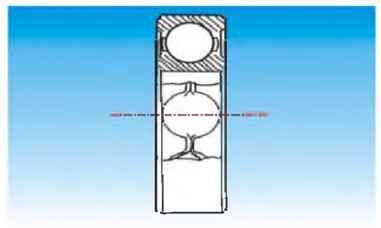
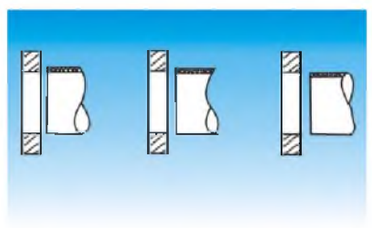
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
68	When gas welding, which is the most likely cause of a serious accident?		Touching hot metal.	Flying sparks.	Leaving torch on floor.	Not extinguishing when finished.
69	For the square pyramid float component shown, which is the correct development?		No.1	No.2	No.3	No.4
70	Which of the materials listed can be cut using an oxygen fuel gas mixture?		Bronze.	Stainless steel.	Cast iron.	Mild steel.
71	What is the limiting factor of a visual inspection of a weld?		There is none.	It will not show if penetration is correct.	It will not indicate blow holes.	It gives an indication only.
72	When working with bonded resins what is their useable pot life?		2 to 3 minutes.	4 to 6 minutes.	9 to 10 minutes.	11 to 14 minutes.
73	What general name is given to files used for finishing?		Single cut.	Draw file.	Second cut.	Smooth.
74	Which column gives the correct factors for a clean cut edge preparation?		Flame adjustment. Speed of travel. Distance between plate and nozzle. Pressure.	Flame adjustment. Speed of travel. Angle of nozzle to plate. Polished surface.	Flame adjustment. Speed of travel. Oversized nozzle. Pressure.	Flame adjustment. Angle of nozzle to plate. Undersized nozzle. Polished surface.
75	Which of the following size nominations is most commonly used?		Actual size.	Basic size.	Nominal size.	Limit of size.
76	What is the plate thickness limit for hand-operated folding machines?		2.5 mm	3.0 mm	3.5 mm	4.0 mm
77	Which system uses a tungsten electrode, causing an arc between itself and the metal to be cut?		Electric arc cutting.	Molten arc cutting.	Arc cutting.	Plasma arc cutting.

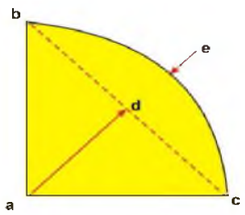
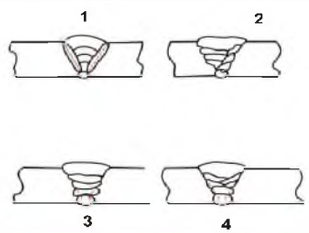
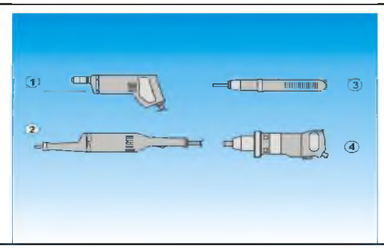
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
78	A repair to a compressor requires a plate of the form illustrated to be designed. Which illustration is dimensioned to be the correct standard.		No.1	No.2	No.3	No.4
79	The speed and feed for a 20 mm diameter reamer would be?		Same as a drill.	75% less than a drill.	50% less than a drill.	25% less than a drill.
80	A scriber should not be used for marking out?		When material is copper.	When material is to be bent.	When material is to be hot worked.	When material is plastic.
81	Hoses are easily damaged and require special care for long life, but what are they reinforced with?		Canvas.	Cotton.	Nylon.	Wire.
82	The diagram shows four types of socket head screws. Identify the socket shoulder screw.		No.1	No.2	No.3	No.4
83	What dictates the size of drill hole required prior to cutting an internal thread?		The core diameter.	The outside diameter.	The thread form.	The thread pitch.
84	When welding at a bench, which list of equipment would be used?		Leather gloves Leather apron Safety boots Boiler suit Baseball cap	Leather gloves Boiler suit Safety boots Welding helmet Leather apron	Leather gloves Leather apron Welding helmet Safety Boots Baseball cap	Leather gloves Leather apron Boiler suit Breathing apparatus Rubber soled boots

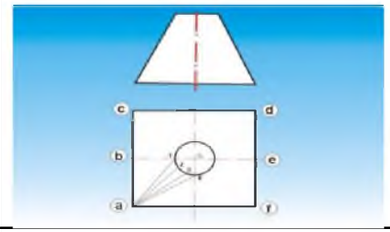
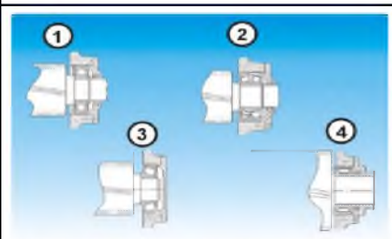
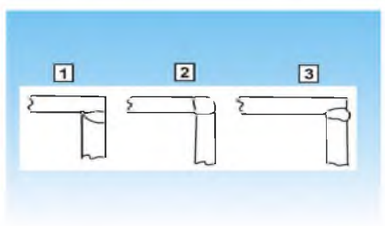
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
85	Which of the following effects could be reduced if hand powered tools were used?		Over familiarity Use of safety glasses Tiredness Personal injury	Fatigue Loss of concentration Accidents Inaccurate work	Distraction Use of hard hat Cramp Eye strain	Injury to hands Tools correctly sharpened Loss of concentration Fatigue
86	What effect will an undersized vee width have on the form produced?		Outside bend may fracture.	Inside bend may fracture.	Outside bend may be scuffed.	Inside bend may be polished.
87	Which correctly identifies a full acetylene cylinder ?		170 bar right hand thread black colour.	170 bar right hand thread blue colour.	15 bar left hand thread maroon colour.	7.5 bar left hand thread red colour.
88	Which material is difficult to weld due to porosity?		Cast iron.	Low carbon steel.	Medium carbon steel.	High carbon steel.
89	When out of use temporarily, how should the workshop surface plate be stored?		Covered with grease.	Covered with a wooden cover.	Wiped with an oiled rag.	Covered with a cloth sheet.
90	A 1.3 m long slot is to be marked off on the floor plate but only a 300 mm straight edge is available. How is this overcome?		By using a cardboard template.	By using a piece of wood.	By using a length of tape.	By using a chalk line.
91	What is the softening temperature for PVC?		100°C	105°C	110°C	115°C
92	Which type of examination reveals pin holes, slag inclusion and lack of fusion?		Dye penetrant.	Visual.	Fluorescent penetrant.	Macroscopic.
93	What is a trammel used for?		For cutting out joints	For scribing large circles	Substitute if dividers are unavailable	For marking off pipes
94	A frustrum of a hexagonal pyramid is shown. Which drawing goes to the left of the figure in third angle projection?		No.1	No.2	No.3	No.4

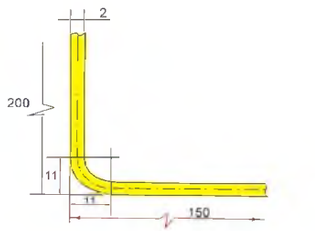
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
95	What is the effect of low pressure cutting oxygen?		Combustion will not occur.	Melting point will not be reached.	The melt will not be blown out.	The cut will be ragged at edges.
96	The Vernier protractor gives an angular accuracy of?		7 minutes of angle.	5 minutes of angle.	1 minute of angle.	3 minutes of angle.
97	Dimensions are read from the bottom of the drawing but if this is not possible what is the next choice?		Turn drawing clockwise 45. reading from RH side.	Turn drawing anti-clockwise reading from RH side.	Turn drawing anti-clockwise reading from LH side	Turn drawing clockwise reading from RH side
98	After sharpening a twist drill, which points are the most important to check?		Web size Rake angle Flank condition Point angle	Land Overall length Chisel edge Helix angle	Clearance angle Chisel edge angle Point angle Lip length	Flute length Face of drill Ensure no rough grinding marks Lip length
99	When fitting a blade into a hacksaw, which direction should the teeth be pointing relative to the handle?		Towards the handle.	Towards if blade is fitted at 90 degrees to normal	Towards if blade is fitted at 180 degrees to normal	Away from the handle.
100	In the following gas flame temperatures, which is the oxy-acetylene?		1880°C	2770°	2820°	3200°C
101	During a plasma cutting process the workpiece was not totally penetrated. What would be the most likely problem?		Speed of cut too high.	Speed of cut too low.	Current is too high.	Metal is too porous.
102	What is shown in No. 1 ?		Small circle guide.	Roller guide.	Spade guide.	Radius bar.
103	How does the brake press differ from the other forming machines?		Uses rollers	Uses male and female formers	Can pierce only	Can crop only

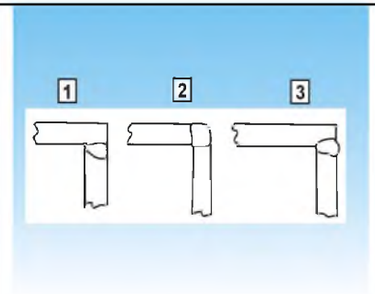
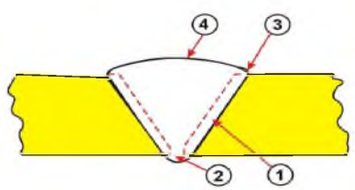
GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
104	When using third angle projection, viewing the component from x, which drawing will be above the front elevation?		A	B	C	D
105	A flashback arrester has been triggered. Which is the correct sequence to follow after this event?		Ascertain cause of activation Clean, if necessary Check equipment Open up flashback arrester	Clean, if necessary Check equipment Open up flashback arrester Ascertain cause of activation	Ascertain cause of activation Check equipment Open up flashback arrester Clean, if necessary	Check equipment Open up flashback arrester Clean, if necessary Ascertain cause of activation
106	When self-secured joints are to be made, which tool is most useful?			A folder.	Tin snips.	A rubber headed hammer.
107	Which table best describes the flexible hacksaw blade?		Reasonably non-	hardened	Easily broken if misused	Reasonably non-rigid
108	If a gas pressure gauge is over-pressured and bursts, what feature minimizes damage?		The flexible back.	A relief valve.	A bursting disc.	Auto shut off valve.
109	The sketch shows the two scales of a Vernier caliper. What degree of accuracy will a measurement have?		0.01	0.02	0.03	0.04
110	When two pieces of metal at right- angles are welded together, what weld is used?		Fillet	Butt	Bevel	Lap
111	What condition must exist in order to cut using an oxygen fuel gas mixture?		Slow oxidation.	Rapid oxidation.	Slow temperature rise.	Low velocity jet.
112	Why is a high pressure blow pipe unsuitable for use in a low pressure system?		The nozzle sizes are different.	The oxygen pressure differs.	The acetylene pressure differs.	Both gas pressures must be equal.

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
	USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR					
113	The engine room workshop carries different types of hacksaw blades. Which blade should be used to cut sheet metal?		Tooth pitch = 6/cm	Tooth pitch = 8/cm	Tooth pitch = 10/cm	Tooth pitch =14/cm
114	A centre punch has a 60° point for?		Ease to see.	Use as scriber.	Long life.	Accurate marking.
115	What type of ball- bearing is shown in the illustration?		Shallow groove.	Two-way thrust.	Heavy duty.	Deep groove.
116	If two pieces of metal are welded together while laying in the same plane, this is known as?		A lap weld.	A corner weld.	A fillet weld.	A butt weld.
117	Which table would give the best checklist following an arc welding process, checking for:		Fusion Undercutting Surface pin holes Excessive spatter	Fusion Undercutting Slag inclusion Excessive spatter	Slag inclusion Fusion Undercutting Contour	Undercutting Surface pin holes Fusion Continuous weld
118	In the system of limits and fits shown, on what basis has the drawing been made?		Interference fits.	Shaft basis fits.	Hole bases fits.	Clearance fits.
119	A white metal lined bearing is to be fitted on to a shaft. Which combination would be used?		Use a flat scraper with engineer's blue on bearing.	Use a flat scraper with engineer's blue on shaft.	Use a half-round scraper with engineer's blue on shaft.	Use a half-round scraper with engineer's blue on bearing.

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
120	For the fillet weld shown, what is the throat length?		ab	ac	ad	de
121	What is the greatest danger when working with sheet metal?		Plate is too large.	Plate is too heavy.	Edges are sharp.	Space to manoeuvre is usually restricting.
122	A flat chisel requires tempering; which temperature and colour is correct for this process?		240°C dark straw.	250°C light brown.	260°C dark brown.	280°C purple.
123	Thick plates require a multi-run weld. Which type of runs are used?		No.1	No.2	No.3	No.4
124	Identify the powered hand tool in No. 1 ?		Drill	Grinder	Screwdriver	Input wrench

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
125	The square to round section shown requires a template. What forms the triangular base line from which the true lengths are obtained?		ab a1	a1 a2	a2 ab	ax ab
126	How is the emergency stop button indented on workshop machinery, for example, the lathe?		Large round head with light emitting diode insert.	Large round head painted green.	Large round head painted red.	Large round head painted yellow.
127	In electric arc welding, what purpose does the the electrode coating serve?		It provides a gas shield Reduces splatter Gives a stable arc Controls the metallurgical properties	Gives a variable arc Reduces splatter Tolerates poor welding Assists multi-runs	Allows damp electrodes to be used Gives a stable arc Reduces slag inclusion Reduces Porosity	Controls the metallurgical properties Assists penetration Tolerates poor welding Reduces splatter
128	Which of the four bearings shown provides positive location?		No.1	No.2	No.3	No.4
129	The figure shows welded tee joints. What preparation is required for No.3 ?		Double U	Double bevel	Single bevel	Single U

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
	USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR					
130	All mechanical cutting devices have the same basic features. These are?		One moving blade	One fixed blade	Two moving blades	One moving and one fixed blade
131	The engine room workshop has a bench shear. What is the maximum thickness of mild steel it will cut?		1 mm	3 mm	5 mm	7 mm
132	For the cover shown, what length of plate is required?		350.2 mm	348.4 mm	345.1 mm	343.7 mm
133	How does a two-stage pressure regulator give precise control?		Both stages are adjustable	First stage only is adjustable	Second stage only is adjustable	Automatical regulation of both stages.
134	When using a centre lathe what operation could a hacksaw be used for?		Cutting off.	Shaping.	Cutting threads.	Removing burrs.
135	A chisel is refurbished and requires the cutting end to be tempered after hardening. How is this achieved?		Heat to 230.C Quench in oil.	Heat to 280.C Quench in oil	Heat to 260.C Quench in water	Heat to 250.C Quench in water
136	In the following, which gives advantages only for adhesive bonding?		Needs good surfaces/no protruding parts.	Poor electrical conductivity/may act as an insulator.	Toxic hazards/reduced galvanic action.	Weight reduction/may join thin sheet.
137	What is significant about the spring-back hacksaw blade?		It can be bent into a circle over its length.	It is a compromise between the flexible and all-hard blade.	It is only available with a large tooth pitch.	It is only suitable for use in a power saw.
138	The drawing of an engine mechanism component gives some surfaces as angles. How would these angles be marked out?		With a steel rule.	With dividers.	With odd leg callipers.	With a vernier protractor.
139	An acetylene welding cylinder is packed with charcoal and charged with acetone. At 15 bar by how many times will it absorb its own volume ?		275 times	325 times	375 times	425 times

GUIA DE ESTUDIO- TITULACION MAQUINISTA NAVAL						
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
140	A short box girder is fabricated from 8 mm thick steel plate. What edge preparation is required for No.1 ?		Double bevel 60°	Double bevel 45°	Single bevel 60°	Single bevel 45°
141	Which of the tables of defects would lead to porosity in a welded joint?		Welding current too low. Speed of travel too fast. Incorrect electrode manipulation. Dirty parent metal.	Damp electrode coating. Damaged electrode coating. Too long an arc. Incorrect starting.	Wrong electrode angle. Incorrect joint set up. Speed of travel too fast. Welding current too low.	Welding current too high. Incorrect root gap. Incorrect electrode size. Dirty parent metal.
142	What feature of a good weld is indicated by No.4 ?		Good penetration.	Blend with parent metal.	Contour even and regular.	Backing bar has been used.
143	Mild steel plate 2 mm thick bent in vees would produce an approximate inside bend radius of?		1.0 mm	1.5 mm	2.0 mm	2.5 mm
144	What is the system called which gives explicit instructions on drawings which cannot be misinterpreted?		Cumulative effect.	Geometrical tolerancing.	Limits and fits.	Tolerances.
145	When carrying out a repair using a bonded resin what precautions should be observed?		Use gloves, do not smoke,use barrier cream and use safety goggles.	Use gloves, ensure below flash point of material, use brush and use safety goggles.	Use gloves, use stirrer, take care opening tins and use safety goggles.	Use gloves, use brush use barrier cream and use safety goggles.

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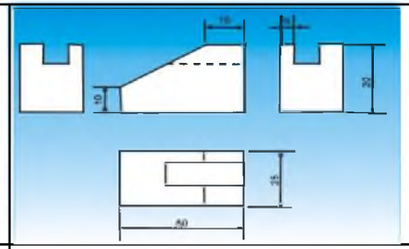
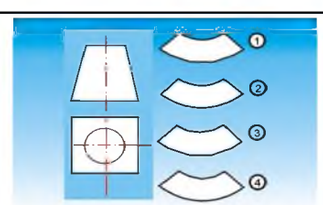
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
146	Looking at the drawing, can this component be made?		Yes.	No - material is not given.	No - scale is not given.	No - relevant dimensions are missing.
147	Which is the preferred table to be checked to ensure a sound weld is produced during an arc welding process?		Electrode Arc length Ambient temperature Electrode angle	Electrode Arc length Welding current Electrode angle	Arc length Welding current Electrode angle Relative humidity	Arc length Electrode angle Ambient temperature Relative humidity
148	What presents the greatest danger when sharpening a chisel on a grinding machine?		Wrong grade of wheel.	Worn wheel.	Exsessive rest clearance.	Using too much force.
149	When tempering a cold chisel, at which part of the chisel is the flame directed?		The cutting edge.	The hammer end.	Mid-way.	The beginning of the tapered portion.
150	What may be done to improve the finished appearance of a self-secured joint?		Caulk.	Solder.	Burnish.	Fit edging wire.
151	What special care do an engineer's dividers need :		Keep oiled.	Keep screw thread clean.	Always use same leg in centre pop.	Protect points when not in use.
152	Thermoplastic type adhesives soften when subject to heat, are fusible		Leather.	Wood.	Aluminium.	Fabrics.
153	The ventilation trunk shown goes from square to round section. What does its development look like?		No.1	No.2	No.3	No.4

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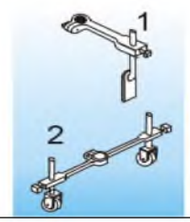
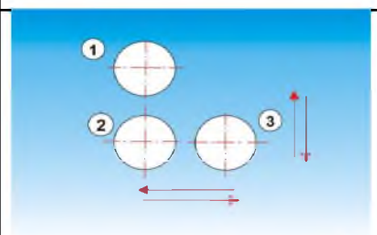
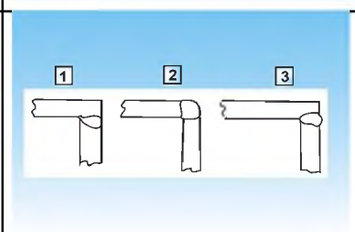
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
	USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR					
154	To make a single grooved seam from 1 mm plate, in what order would the following operations be carried out?		Set to thickness Hook together Fold Flatten	Fold Hook together Flatten Set to thickness	Flatten Set to thickness Fold Hook together	Fold Set to thickness Hook together Flatten
155	In the method of datum dimensioning (sometimes known as parallel dimensioning), what is the advantage over conventional dimensioning?		Makes machining easier.	Improves positional accuracy.	Reduces the marking out time.	Ignores conventions.
156	What is the attachment shown in No. 2 ?		Small circle guide.	Roller guide.	Spade guide.	Radius bar.
157	The safety features for a welded acetylene gas cylinder are?		Spring load relief valve.	Bursting discs.	Fusible plugs.	Gas loaded relief valves.
158	The sketch shows the configuration of a pinch bending roll. How does this operate?		Roller No. 2 rises	Roller No. 1 is lower	Rollers No. 2 and No. 3 rise	Roller No. 3 rises
159	A short box girder is fabricated from 18 mm thick steel plate. What edge preparation is necessary for No.3 ?		Double bevel	Single bevel	None	Single U
160	A component with a working temperature of 325°C is to be joined using epoxy resin. Which of the following is suitable?		Epoxy silicone.	Epoxy phenolic.	Epoxy nitrile.	Phenolic nitrile.

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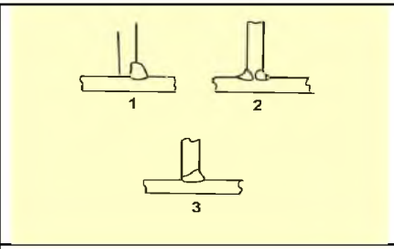
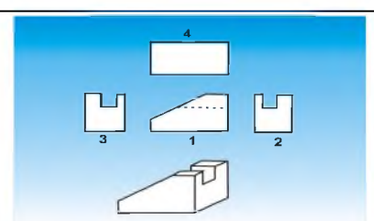
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
161	The figures show welded tee joints. What preparation is required for No. 1 ?		Single V	Double V	Double U	None
162	Prior to welding, plate edges are prepared to?		Allow filler to the flow.	Give economical use of the filler.	Give a flat surface to the filler.	Allow maximum penetration of the filler.
163	Which system of welding uses a shield of Argon and a non-consumable electrode?		Gas metal arc.	Metal inert gas.	Manual metal arc.	Tungsten inert gas.
164	For a particular welding arrangement, the decision is to use a manifold system. Why would this be chosen?		Because of the long time span of welding	The discharge rate is too high from single bottle	Better stability when using large bore nozzles	Cost - two cylindersare cheaper than one
165	Plates of less than 6 mm thickness (T) have no edge preparation but what ratio of (T) is the gap?		T/6	T/4	T/2	T/1
166	When tempering use is made of the microscopic oxide film formed on the surface, in what sequence does change occur?		Straw Brown Purple Blue	Straw Purple Blue Brown	Brown Purple Blue Straw	Purple Straw Brown Blue
167	A 90°centre punch is specifically designed to?		Act as a pin punch.	Pop mark for drilling.	To scribe.	Give long life.
168	Given a set of odd-leg calipers and a small cork, what use is the cork?		Cork is used as centre when marking out.	Cork is to protect the point.	Cork has the same properties as silica gel and prevents corrosion.	Cork is a sales gimmick.
169	In the sketches, which view is incomplete?		No.1	No.2	No.3	No.4

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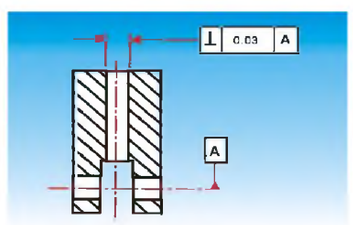
Q. Number	**Question**	***IMAGEN***	**A**	**B**	**C**	**D**
USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR						
170	If a view is projected in a direction which is not horizontal or vertical, what name is given to the view?		An auxiliary view.	An isometric view.	An elevated view.	A pictorial view.
171	Sketch shows a gas cutting blowpipe. What is control No. 1 used for?		Acetylene control.	Pre-heat oxygen.	Mixing gases.	Cutting oxygen.
172	What does the geometrical tolerancing shown in the drawing refer to?		Flatness.	Roundness.	Screw thread.	Squareness.

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

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ANSWERS	
32	D
33	B
34	D
35	C
36	D
37	D
38	D
39	D
40	D
41	A
42	C
43	B
44	D
45	B
46	C
47	C
48	B
49	D
50	A
51	D
52	D
53	D
54	B
55	C
56	B
57	B
58	A
59	B
60	A
61	C
62	D

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USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR	
ANSWERS	
63	D
64	D
65	C
66	D
67	C
68	D
69	D
70	D
71	D
72	A
73	A
74	A
75	C
76	A
77	D
78	D
79	C
80	B
81	A
82	B
83	A
84	B
85	B
86	A
87	C
88	D
89	B
90	D
91	D
92	D
93	B

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USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR	
ANSWERS	
94	A
95	C
96	B
97	D
98	C
99	D
100	D
101	A
102	C
103	B
104	C
105	C
106	B
107	D
108	A
109	B
110	A
111	B
112	D
113	D
114	D
115	D
116	D
117	A
118	C
119	C
120	C
121	C
122	C
123	D
124	A

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ANSWERS	
125	**B**
126	**C**
127	**A**
128	**C**
129	**C**
130	**D**
131	**C**
132	**D**
133	**C**
134	**A**
135	**C**
136	**D**
137	**B**
138	**D**
139	**C**
140	**D**
141	**B**
142	**C**
143	**C**
144	**B**
145	**D**
146	**D**
147	**B**
148	**C**
149	**D**
150	**B**
151	**D**
152	**C**
153	**A**
154	**D**
155	**B**

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USE HAND AND POWER TOOLS FOR FABRICATION AND REPAIR	
ANSWERS	
156	**B**
157	**B**
158	**D**
159	**A**
160	**B**
161	**D**
162	**D**
163	**D**
164	**B**
165	**C**
166	**A**
167	**B**
168	**B**
169	**D**
170	**A**
171	**D**
172	**D**