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Student Personal Identification Number

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Solomon Islands National Form Six Certificate

DESIGN TECHNOLOGY

2017

QUESTION and ANSWER BOOKLET

Time allowed: 2 ½ hours

There are TWO sections in this paper. Each section is worth 50 marks.

You should spend about 1¼ hours on each section.

SECTION A: DESIGN UNDERSTANDING

Compulsory. Answer ALL questions.

SECTION B: MAJOR OUTCOMES

Choose ONE from Major 1– Major 4

<u>Major</u>	<u>Topic</u>	<u>Questions</u>	<u>Pages</u>
1	Wood Technology	B1 – B5	11– 19
2	Food and Nutrition	B6 – B10	20 – 29
3	Technical Graphics	B11 – B13	30 – 37
4	Metal Technology	B14 – B19	38 – 48

Select only ONE major and answer all the questions in that major.

Write your answers in the spaces provided in this booklet.

Write your **Student Personal Identification Number (SPIN)** in the box on the top right-hand corner of this page and on the fold-out flap at the back of this booklet.

Check that this booklet contains pages 2- 49 and that none of these pages are blank.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

TOTAL MARKS

100

SECTION A DESIGN UNDERSTANDING**50 MARKS***Answer ALL questions.***QUESTION A1****[12 marks]**

- a) Complete the table below by writing, in Column B, the element of design that corresponds to the definition given in Column A.

NO.	COLUMN A	COLUMN B
1.	Describes the lightness or darkness of a colour.	
2.	Surface quality of materials which may be seen or felt.	
3.	The organization of shape, regarded as decoration.	
4.	Derived from a line; formed by a series of lines running in different directions.	
5.	A distinct, elongated mark as if drawn by a pencil; indicates direction.	

(5 marks)

- b) Explain the difference between open design brief, and closed design brief.

(2 marks)

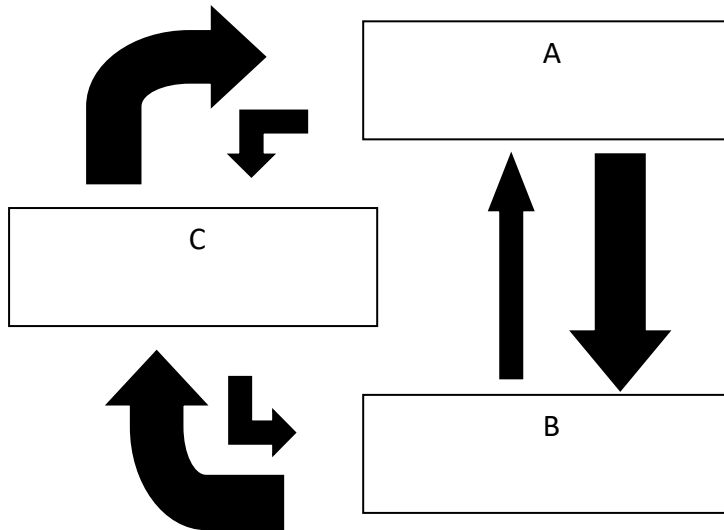
- c) Your friend has asked you to write a design brief for him, concerning a designing problem that he wants to solve.

Identify **two** components that you must remember to include in the design brief.

- i. _____
- ii. _____

(2 mark)

d) Study the illustration given below, and answer the questions that follow it.



i) Describe what the thick arrows indicate.

(1 mark)

ii) Explain why small arrows are included in the illustration.

(1 mark)

e) **It is important that the designer knows the specifications, for the design task at hand.**

Justify the statement above.

(1 mark)

QUESTION A2**[11 marks]**

- a) Fill in the blanks in the illustration given below, with the correct designing tasks:

DESIGNING	
INVESTIGATING	
i. _____	
	<ul style="list-style-type: none"> • Clarify the problem • Note expectations about solution • Explore issues about the problem
ii. _____	
iii. Identify the most likely idea	

(2 marks)

- b) Define the following terms:

i) **Expectation** _____

ii) **Limitation** _____

(4 marks)

- c) One of the activities during investigation, is to explore issues about the problem.
 Identify **one** way of exploring these issues.

 (1 mark)

- d) Thomas has investigated a design problem and now, has to identify possible solutions to the problem.

State **two** criteria that Thomas should use, to identify the possible solutions.

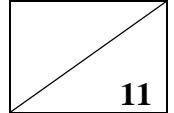
Criteria 1 _____

Criteria 2 _____

(2 marks)

e) Differentiate between **investigating** and **devising**.

(2 marks)



QUESTION A3**[11marks]**

a) A design journal is important to the implementation, and completion of a design project.

i. Define the term **design journal**.

(2 marks)

ii. State **three** contents of a design journal.

1. _____
2. _____
3. _____

(3 marks)

b) Documentation is carried out at each stage of the design process.

Explain **two** ways in which the designer can use the information in this documentation.

i. _____

ii. _____

(2 marks)

c) Give a reason for the designer, developing the following at the beginning of the design project:

i. action plan _____

ii. budget _____

(2 marks)

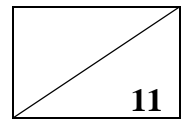
d) You have to prepare an action plan for a design project.

Explain **two** criteria that you will use to prepare this action plan.

i. _____

ii. _____

(2 marks)



QUESTION A4**[8 marks]**

a) State **two** resources a designer would require, to carry out a design project.

- i) _____
ii) _____
(2 marks)

b) Identify the term that means, a person's knowledge and ability in doing something well.

(1 mark)

c) Describe **two** ways in which the workshop can be kept clean, during the production of the solution.

- i. _____

ii. _____

(2 marks)

d) Francis has to design a product for a client.

- i) Give **one** reason why he has to develop a prototype.

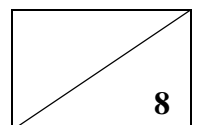
(1 mark)

e) Explain **two** safety rules that Francis has to observe, in the workshop.

1. _____

2. _____

(2 marks)



QUESTION A5**[8 marks]**

- a) The designer's reflection on personal achievement is part of evaluation.
Identify **two** criteria that this reflection, can be based on.

i. _____
 ii. _____
 (2 marks)

- b) Betty has completed her design task, and now has to draw conclusions about the extent to which the design brief has been met.

Identify **three** factors that Betty can use to draw these conclusions.

i. _____
 ii. _____
 iii. _____
 (3 marks)

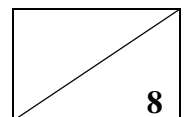
- c) During evaluation, the designer has to analyse the production of the outcome.
Give reasons for the statement above, in relation to the factors given below:

i. the option chosen _____

ii. the procedures or recipes used _____

iii. cost effectiveness _____

 (3 marks)



SECTION B MAJOR OUTCOMES

There are nineteen questions in this section - Major 1 – Major 4. Choose only ONE Major and answer ALL the questions in your chosen Major.

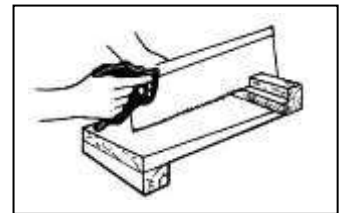
<u>Major</u>	<u>Topic</u>	<u>Questions</u>	<u>Pages</u>
1	Wood Technology	B1 – B5	11– 19
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SECTION B MAJOR 1: WOOD TECHNOLOGY**50 MARKS***Answer ALL questions (B1 – B3).***QUESTION B1****[10 marks]****Multiple Choice**

Circle the letter that correspond to the most correct answer.

1. Name the holding and supporting tool shown in the diagram on the right.

- A Try Square
- B Bench Hook
- C Coping Saw
- D Dovetail Saw safety

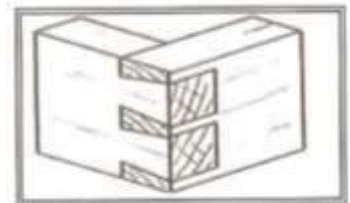


2. A “**NO UNAUTHORISED ENTRY**” sign means to

- A Find another way of getting in.
- B Ignore it if you can't see the reason for it.
- C Keep out unless you have permission to enter.
- D Proceed with extreme care.

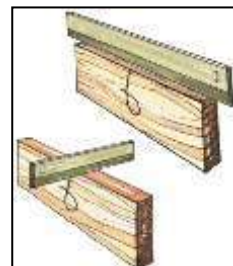
3. The woodwork corner joint shown on the right is the

- A. mitre joint.
- B. dowel joint.
- C. common dovetail joint.
- D. square haunch and mortise and tenon.



4. The tool used in the diagram shown on the right is known as

- A wooden ruler.
- B straight edge.
- C flat rule.
- D rule.



5. Name the tools shown in the diagram on the right which is used for cutting holes in soft wood and boards.

- A. Hacksaw
- B. Rip Saw
- C. Sash Cramp
- D. Keyhole Saw



QUESTION B2


(9 marks)

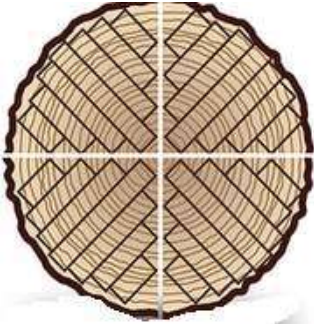
Timber conversion

1. The table below shows two methods of conversion of timber.

Name the method of conversion shown and list one advantage of each method.

(4 marks)

Conversion method Diagram	Name	Advantage
	Name _____	1. _____ _____ _____

	Name _____	1. _____ _____ _____
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2. Moisture content of timber is the amount of moisture present in the timber.

(a) Calculate the percentage moisture content of a sample piece of the timber using the given information.

Wet weight of the sample = 140 gram

Dry weight of the sample = 110 gram

(2 marks)

3. List **two** characteristic of Hardwood and Softwood trees.

Hardwood

1. _____

(½ mark)

2. _____

(½ mark)

Softwood

1. _____

 (½ mark)

2. _____

 (½ mark)

4. Timber is treated before use to prevent insect attack. Explain the process of pressure treatment of timber.

Pressure treatment process

 (1 mark)

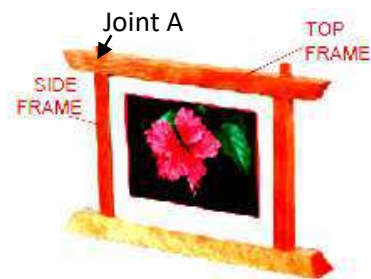
QUESTION B3

(11 marks)

1. Shown on the right is a picture frame with top and side labelled together with a joint labelled as A.

Picture frame

Length of top frame = 350mm
 Height of side frame = 250 mm
 Width all member = 45mm
 Thickness' all member = 20 mm
 Thickness back panel = 4 mm



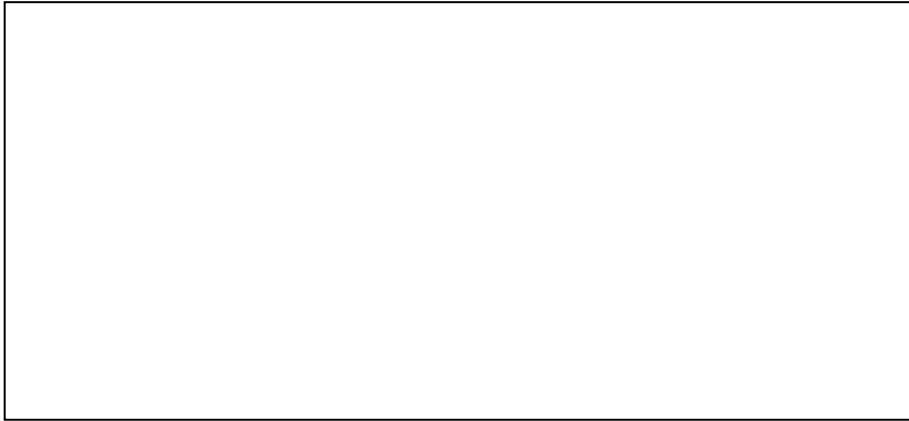
Using the information given above, fill the table below.

Member	No	Material	Finished size		
			L	W	TH
Top	1	Dakua	350	45	
Bottom	1	Dakua	350	45	20
Side		Dakua			20
Back panel	1	Ply	300	230	

(5 marks)

2. (a) Sketch a method of fixing back panel to frame

(1 mark)



(b) Name an alternative Joint that can be used at Joint A.

_____ (1 mark)

3. Calculate the cost of the timbers for the picture frame from the following information.

(4 marks)

Prices	Calculation	Cost
Timber for top member is \$ 3.00/m		
Timber for bottom member is \$ 3.00/m		
Timber for side member is \$ 2.50/m		
Back panel (1.2m x2.4m) = \$70.00 square meter		

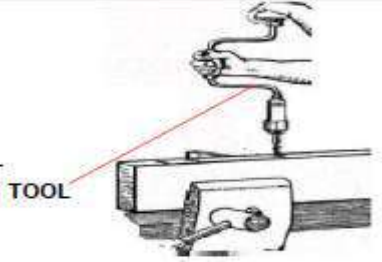

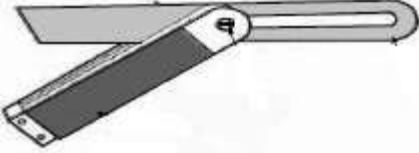
QUESTION B 4

(8 marks)

HAND TOOLS

1. Complete the table below with the correct Name and use of each hand tool.

(3 marks)

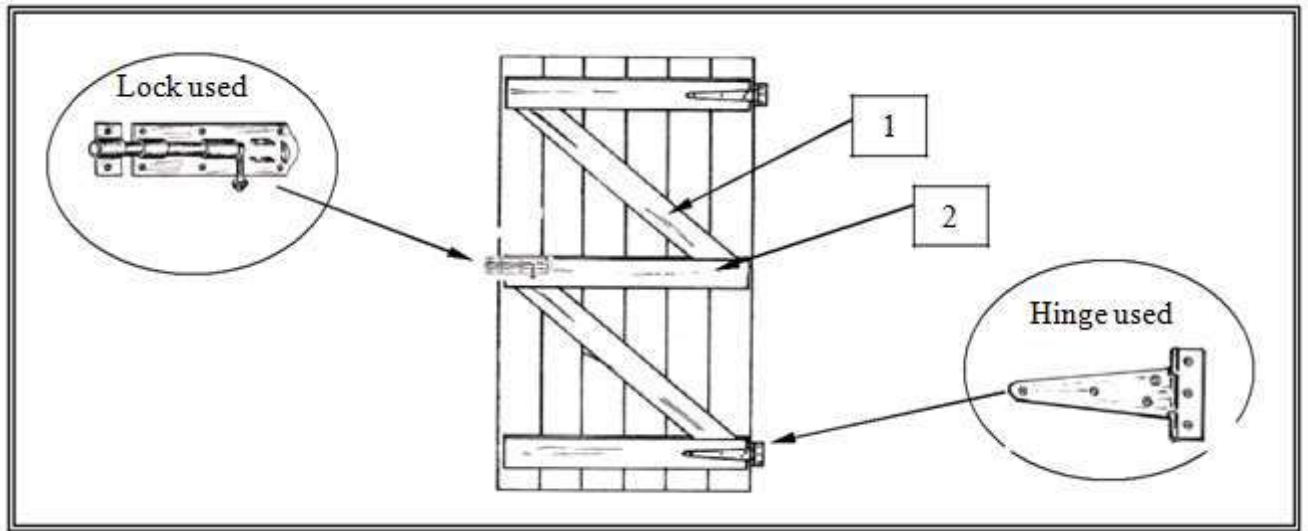
Hand tool	Name	Use
	<hr/>	<hr/> <hr/> <hr/>
	<hr/>	<hr/> <hr/> <hr/>
	<hr/>	<hr/> <hr/> <hr/>

2. Machine operation

(a) List **two** Personal safety rules that should be observed while using portable circular saw.

(2 marks)

3. Study the diagram given below and answer the questions that follow.



(a) Identify the type of door shown above.

(1 mark)

(b) Label the parts 1 and 2.

Part 1 _____ (½ mark)

Part 2 _____ (½ mark)

(c) Name the type of lock and Hinge used in the diagram.

Name of Lock used _____ (½ mark)

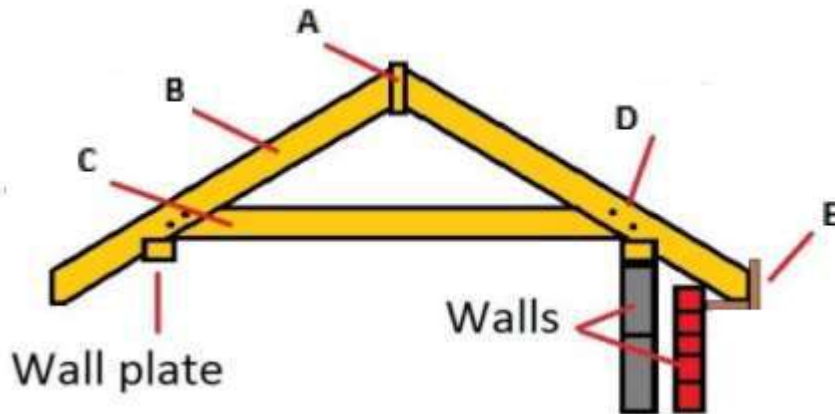
Name of Hinges used _____ (½ mark)

QUESTION B 5**(12 marks)**

1. Given below is the Apex detail of a Roof Frame.

Label the parts A-E

(5 marks)



Name the parts

A- _____

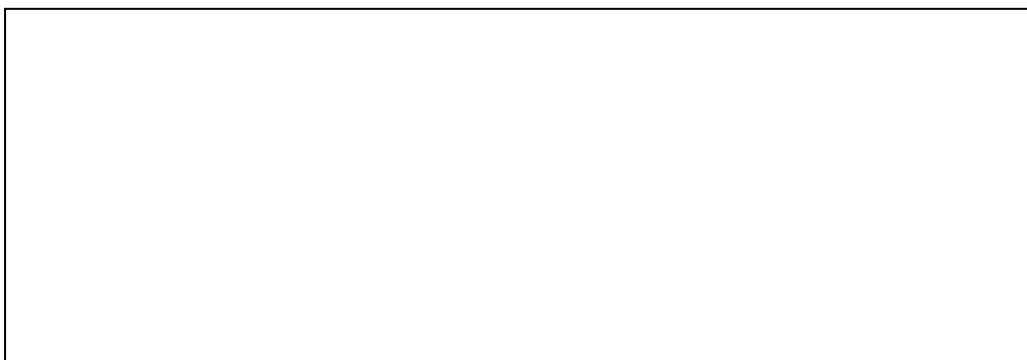
B- _____

C- _____

D- _____

E- _____

2. Complete the diagram below by showing the layers of veneer in three layered Plywood and label each layer. (2 marks)



3. State **one** application of the following manufactured boards.

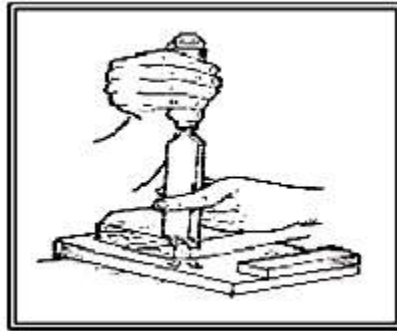
Particle board

_____ (1 mark)

Masonite

_____ (1 mark)

4. Study the diagram given below and answer the questions that follow.



(a) Name the woodworking tool shown in the diagram above.

(1 mark)

(b) Explain the process being carried out in the diagram.

(1 mark)

(c) Explain the purpose of the process

(1 mark)

SECTION B**MAJOR 2: FOOD AND NUTRITION****50 MARKS**

Answer ALL questions (B6 – B10).

QUESTION B6**[10 marks]**

- a) Match the statements given in Column B with the terms given in Column A.

Write the letter corresponding to the statement in Column B, in the box beside the matching term in Column A.

NO.	COLUMN A	COLUMN B
1.	Maltose <input type="checkbox"/>	A. A water soluble vitamin
2.	Lipid <input type="checkbox"/>	B. A mother who is breastfeeding her baby
3.	Absorption <input type="checkbox"/>	C. a person made weak or disabled by illness or injury.
4.	Thiamin <input type="checkbox"/>	D. A disaccharide
5.	Lactating woman <input type="checkbox"/>	E. Broken down to fatty acids and triglycerides, in the body.
6.	Complete protein <input type="checkbox"/>	F. The chemical process the body transforms the food we eat, into the fuel that keeps us alive.
7.	Metabolism <input type="checkbox"/>	G. The process by which the products of digestion pass through the walls of the intestine or digestive tract into the bloodstream.
8.	Invalid <input type="checkbox"/>	H. Has all the essential amino acids.
		I. Helps to moisten food in the mouth.

(4 marks)

- b) Describe
- two**
- main functions of protein in the body.

Function 1 _____
_____Function 2 _____

(2 marks)

- c) Differentiate between **macronutrients** and **micronutrients**.

(2 marks)

- d) Mary has developed the menu below for her school lunch.

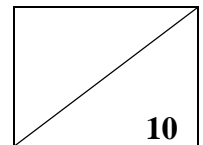
Boiled egg Fried fish Boiled sweet potato

Explain why you will tell Mary that this menu is not nutritious.

(1 mark)

- e) Teenage girls are encouraged to eat dark green, leafy vegetables and red meats.
Give a reason to support this statement.

(1 mark)



QUESTION B7**[9 Marks]**

a) Study the illustration on the RDI table given below and answer the questions that follow it.

RDI's for Individual Groups									
Subject	Age (Years)	Body Weight (kgs)	Energy (kJ's)	Protein (g)	Vit C (mg)	Vit D (mg)	Sodium	Iron	Zinc
Men	18-35	70	11600	70	30	-	920-2300	10	12-16
	35-55		10400						
	55-75		8800						
Women Pregnant Lactating	18-35	58	8400	58 (+8)66 (+20)78	30	-	920-2300	12 15 15	12-16 16-20 18-22
	35-55		7600						
	55-75		6400						
	18-35	9000	-	-	-	-	-	-	-
	35+	8200							
	18-35	10900							
35+	10100								
Infants	0.5-1	-	460-420/ kg	2.5/kg	30	10	320-580	4.8	4.5-6
Children	1-3	13	5400	20-39	30	10	320-1150	5	4.5-6
	Boys	3-7	19	7200	26-51	30	-	460-1730	7
7-11		28	9200	37-66	30	-	600-2300	10	9-14
11-15		41	12200	51-87	30	-	920-2300	12	12-18
15-18		61	12600	67-90	30	-	920-2300	12	12-18
Girls	3-7	18	7200	2-51	30	-	460-1730	7	6-9
	7-11	27	8800	36-61	30	-	600-2300	10	9-14
	11-15	42	10400	52-75	30	-	920-2300	12	12-18
	15-18	55	9200	60-66	30	-	920-2300	12	12-18

i. Identify the RDI:

1. for energy for a pregnant woman _____ (1 mark)
2. for protein for children _____ (1 mark)

- ii. Calculate and identify the amount of Vitamin C that an adolescent girl should be ingesting in one meal.

(2 marks)

- b) Define the term **nutrition-related disease**.

(1 mark)

- c) State the cause of **kwashiorkor**, in young children.

(1 mark)

- d) George is suffering from gout, and does not know it.

Explain **two** symptoms that a doctor will identify to him, because of this disease.

Symptom 1 _____

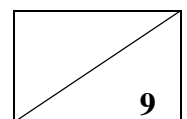
Symptom 2 _____

(2 marks)

- e) A daily exercise of about thirty minutes, is beneficial to our health.

Give **one** reason to support the statement above.

(1 mark)



QUESTION B8**[6 marks]**

- a) Define the term **preservation**.

(1 mark)

- b) Describe the difference in the preservatives that are used in domestic and commercial preservation.

(2 marks)

- c) Salt and sugar are two preservatives commonly used when preserving food.
Explain the principle of preservation involved in the use these two preservatives.

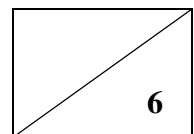
(1 mark)

- d) It is good to preserve fruits when they are in season.
Give **two** reasons to justify the statement above.

Reason 1 _____





Reason 2 _____

(2 marks)



QUESTION B9**[15 marks]**

- a) Match the uses given in Column B with the pictures of kitchen linen given in Column A. Write the letter corresponding to the use in Column B, in the box given beside the picture in Column A.

NO.	COLUMN A	COLUMN B
1.	 <div style="text-align: right; margin-right: 50px;"><input type="checkbox"/></div> <p>Source: https://fr.pinterest.com/avienusmcwife/ikea/</p>	A. To dry cutlery and crockery after they have been washed
2.	 <div style="text-align: right; margin-right: 50px;"><input type="checkbox"/></div> <p>Source: http://multanindustries.com/?pageid=147</p>	B. For removing hot pots and pans from stoves, hot baking trays, or for opening hot oven doors
3.	 <div style="text-align: right; margin-right: 50px;"><input type="checkbox"/></div> <p>Source: http://andstar.com</p>	C. For wiping kitchen tables
4.	 <div style="text-align: right; margin-right: 50px;"><input type="checkbox"/></div> <p>Source: http://www.worthtex.com/gallery/kitchenlinen.html</p>	D. For preventing insects and germs from contaminating food
		E. To protect garments from staining during cooking

(2 marks)

b) Define the following terms:

i. **kitchen hygiene** _____

ii. **thawing** _____

iii. **cross contamination** _____

(3 marks)

c) Your mother has brought home some fresh taro, raw fish and butter.

Describe how she should store each of these foods.

Fresh taro _____

Raw fish _____

Butter _____

(3 marks)

d) Differentiate between the quality of taro leaves that are cooked to the right length of time, and those that are overcooked.

Cooked to the right length of time _____

Overcooked _____

(2 marks)

- e) Cover cuts and sores with waterproof plasters when handling food.

Give a reason for the statement above.

(1 mark)

- f) Your class is going to cater for a break-up party for your teachers, at the end of this year.

Outline **four** principles of food hygiene that the members of your class, should bear in mind while catering.

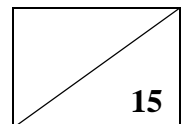
Principle 1 _____

Principle 2 _____

Principle 3 _____

Principle 4 _____

(4 marks)



QUESTION B10**[10 marks]**

- a) Match the definitions given in Column B, with the terms given in Column A. Write the letter corresponding to the definition in Column B, in the box given beside the term in Column A.

NO.	COLUMN A	COLUMN B
1.	Food additive <input type="checkbox"/>	A. The process of transforming raw ingredients into prepared food products.
2.	Food promotion <input type="checkbox"/>	B. Describes handling, preparation, and storage of food in ways that prevent food borne diseases.
3.	Food production <input type="checkbox"/>	C. A substance added to food to enhance its flavor, texture, appearance or nutritive value or to preserve it
4.	Food security <input type="checkbox"/>	D. Attempts to persuade consumers to think favorably about a product, so that they go to the store to purchase the product
		E. The state of having reliable access to a sufficient quantity of affordable, nutritious food.

(2 marks)

- b) Describe **one** nutritional disadvantage of the consumption of processed foods, in your community.

(1 mark)

- c) Give a reason to justify why each of the following food issues, are prevailing in your community:

- i. there is an increase in non-communicable diseases.

ii. there are not enough fish for the tribal communities.

iii. the people can no longer depend on wild foods.

(3 marks)

d) You have been asked to give a talk on *food labels and making informed food choices* to your community.

List **four** information on food labels that you will include in your discussion.

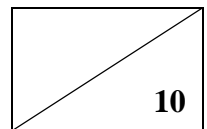
i. _____

ii. _____

iii. _____

iv. _____

(4 marks)



SECTION B**MAJOR 3: TECHNICAL GRAPHICS****50 MARKS**

Answer ALL questions (B11 – B13)

Question B11**[12 marks]**



(a) Complete the table below by drawing the types of lines.

(2 marks)

Line Description	Construct the lines
Centre line	
Continuous thick line	
Thin dash line	
Thick chain line	

(b) Identify the Technical Drawing instrument shown below and state its function in drawing.

(2 marks)

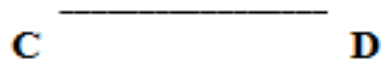
Drawing Instrument	Name and Function
	Name _____ Function _____ _____ _____
	Name _____ Function _____ _____ _____

(c) Quadrisect the given line AB

(3 marks)

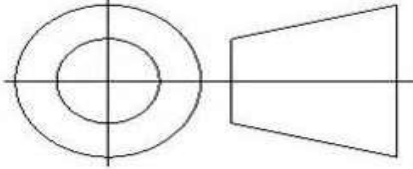


(d) Construct a Regular Pentagon using the given base line CD and enlarge it using a scale factor of 2:3 (4 marks)



(e) Identify the type of Technical drawing symbol shown below

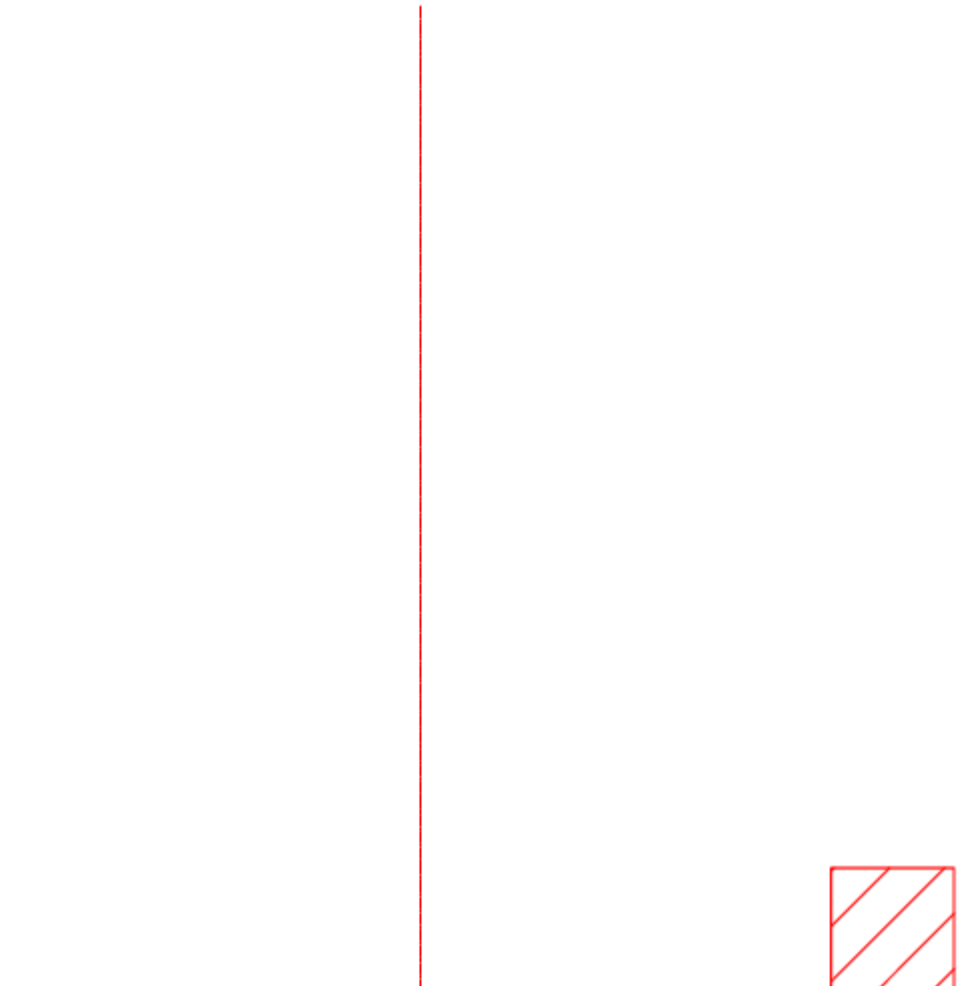
(1 mark)

Symbol	Name
	

QUESTION B 12

(8 marks)

Given below is a baseline, centre line and a starting point A of a square Right hand helical spring
Construct the helical spring for one revolution having a pitch of 100mm. (4 marks)



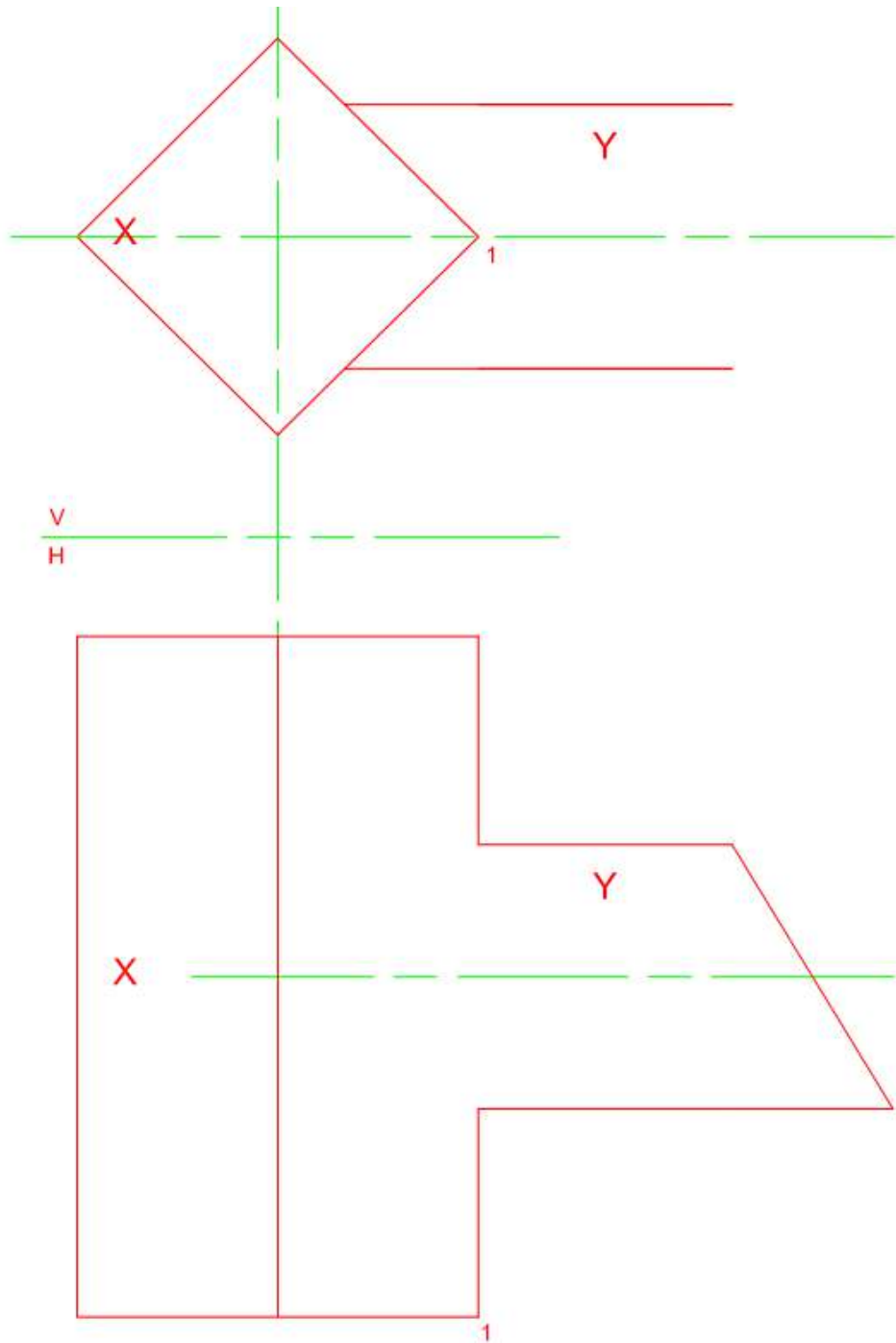
(b) Given the 3rd angle orthographic projection of a square prism to a cylinder interpenetration

1. Complete the Plan

(2 marks)

2. Draw the lines of intersection

(2 marks)

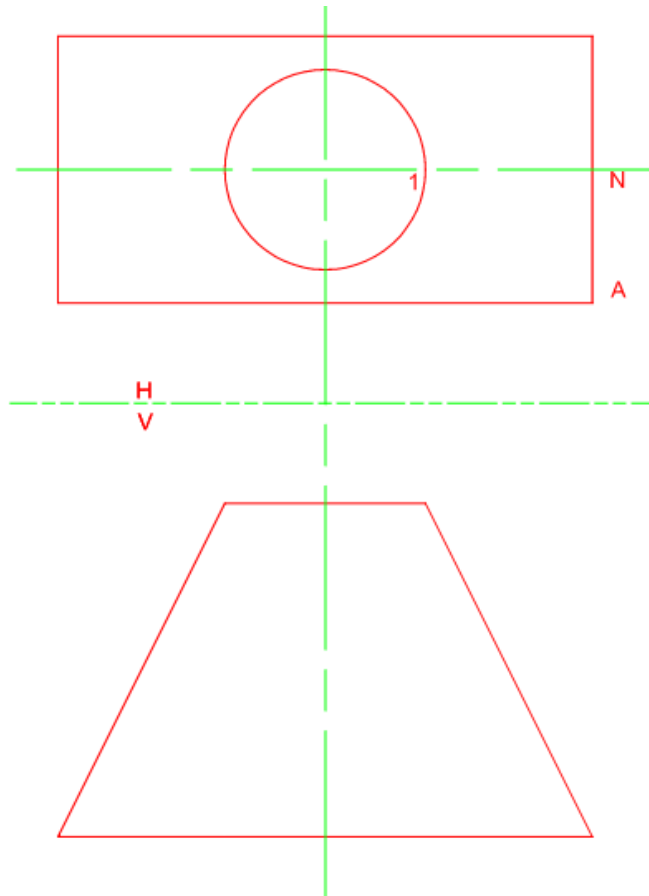


QUESTION B13**(30 marks)**

1 Given below is the 3rd angle orthographic projection of a circle to rectangular Transition piece

(a) Complete the Plan and Elevation to show all the fold lines (3 marks)

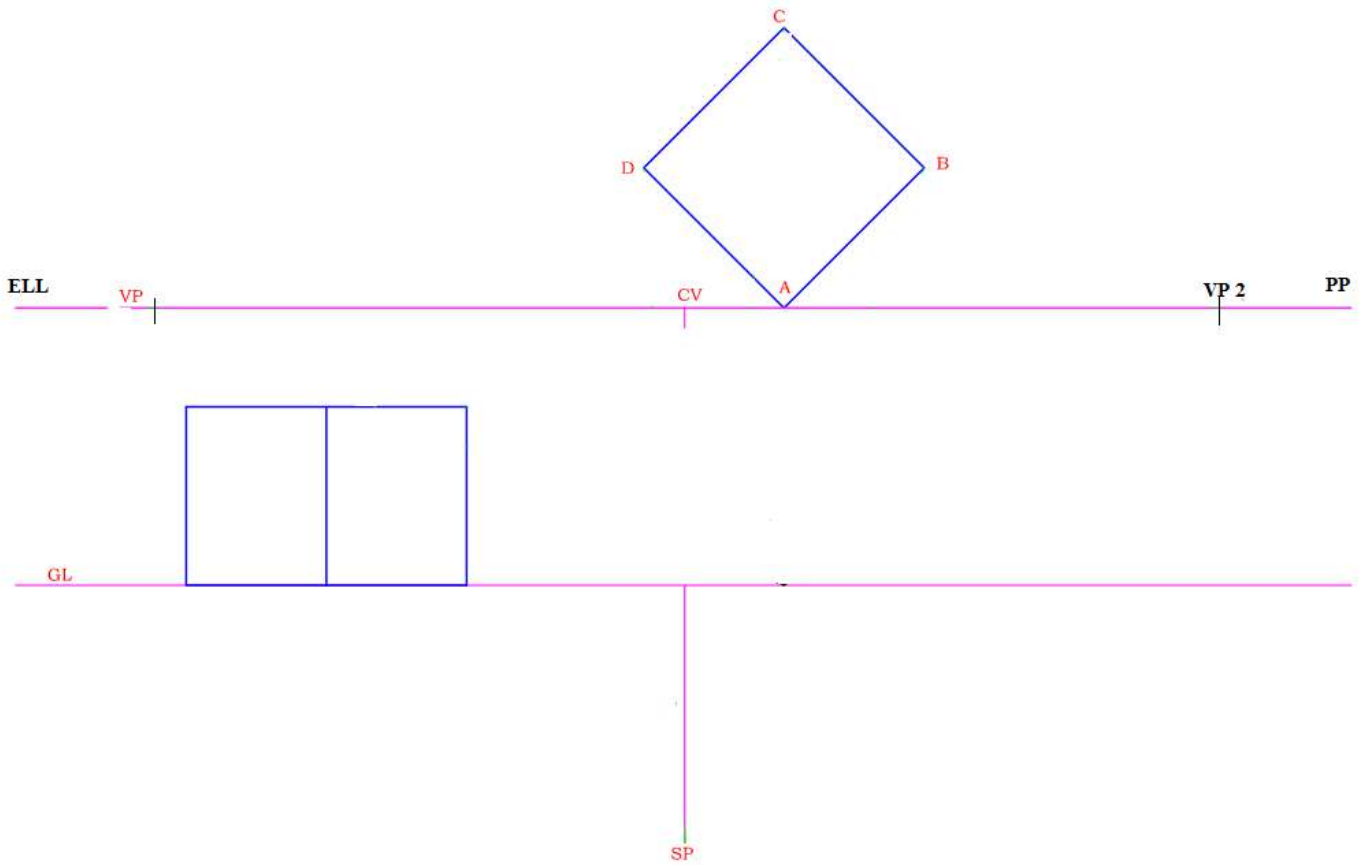
(b) Find the True lengths and Draw half Development of transition piece using the given starting point N (4 marks)



2. Draw the
Two Point
construction

1
N

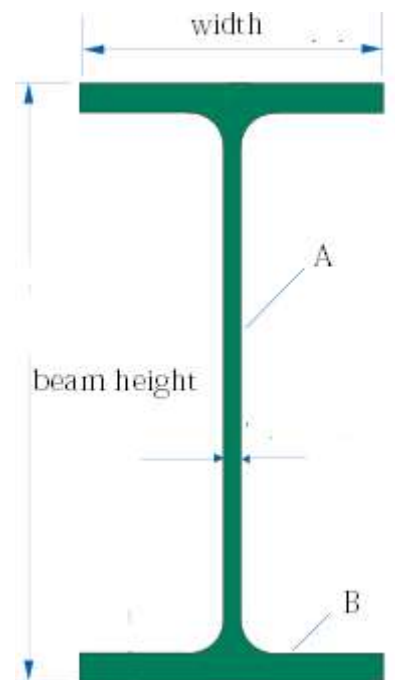
given shaped block in
Perspective. Show all
lines. (5 marks)



3. Given on the right is the diagram of a universal beam
Label the parts A & B of the beam.

Part A _____ (1 mark)

Part B _____ (1 mark)



4. The diagram below shows the loaded simple truss.

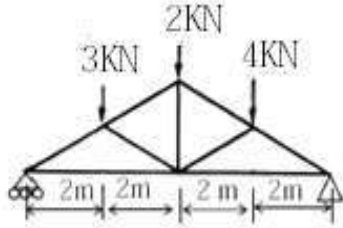
Use Graphical method to determine the following:

(a) Determine the reaction R_L and R_r

(4 marks)

(b) Determine the magnitude and position of resultant and equilibrium forces

(6 marks)



R_L - _____

R_r - _____

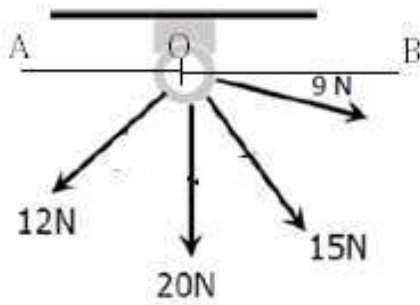
Scale _____



	Magnitude	Direction
Resultant		
Equilibrium		

5. The space diagram shown below has 4 forces acting from a point at different angles.

Find the resultant and equilibrium force acting in the system

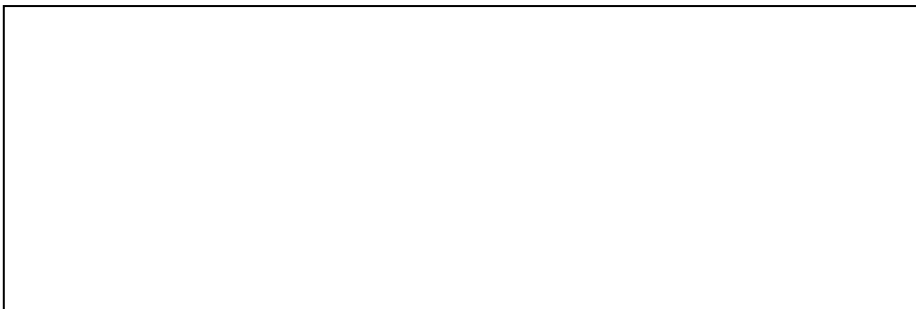


	Magnitude	Angle from OB
Resultant		
Equilibrium		

(4 marks)

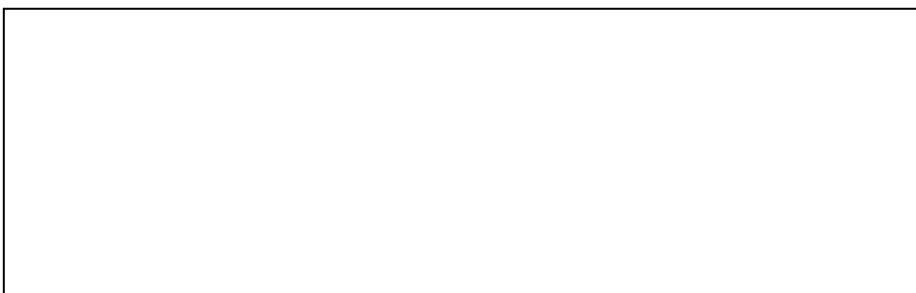
6. Draw the diagram of **two** types of forces on a surface.

(a) Concurrent Force



(1 mark)

(b) Non Concurrent Force



(1 mark)

SECTION B**MAJOR 4: METAL TECHNOLOGY****50 MARKS**

Answer ALL questions (B14 – B19).

Question B14**[10 marks]****Multiple Choice**

Circle the letter that corresponds to the most correct answer.

1. The best method to ensure the edges of a metal water bucket is strong and rigid is the

- A. wire edge.
- B. folding edge.
- C. single-fold edging.
- D. double-fold edging

2. Which type of sheet metal tool is shown on the right?

- A Drop saw
- B Bench cutter
- C Bench shears
- D Hydraulic cutter

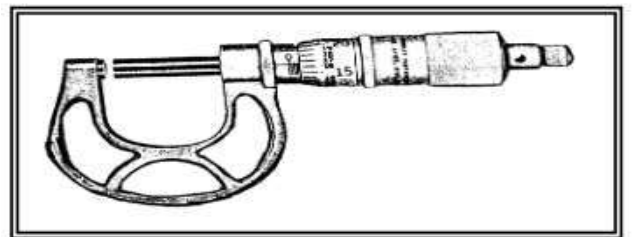


3. The colour of the acetylene cylinder in gas welding is

- A red.
- B black.
- C yellow.
- D maroon.

4. The measuring tool shown on the right is

- A inside calliper.
- B outside micrometre.
- C outside calliper.
- D outside micrometre calliper.



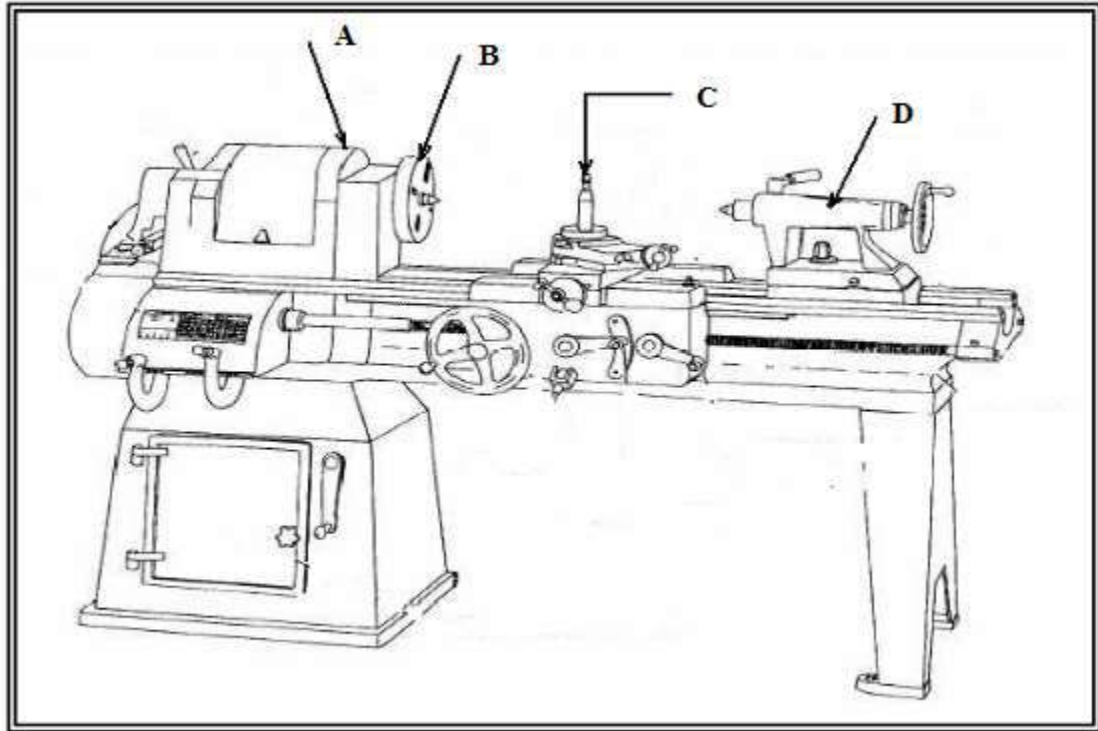
5. A filler rod used in Arc welding is called

- A a wire.
- B a bead.
- C a fillet.
- D an electrode.

QUESTION B15**(5 marks)**

Types of Equipment

1. A sketch of metal lathe machine is shown below.
Label the parts A – D



Label the Parts

A- _____

(½ mark)

B- _____

(½ mark)

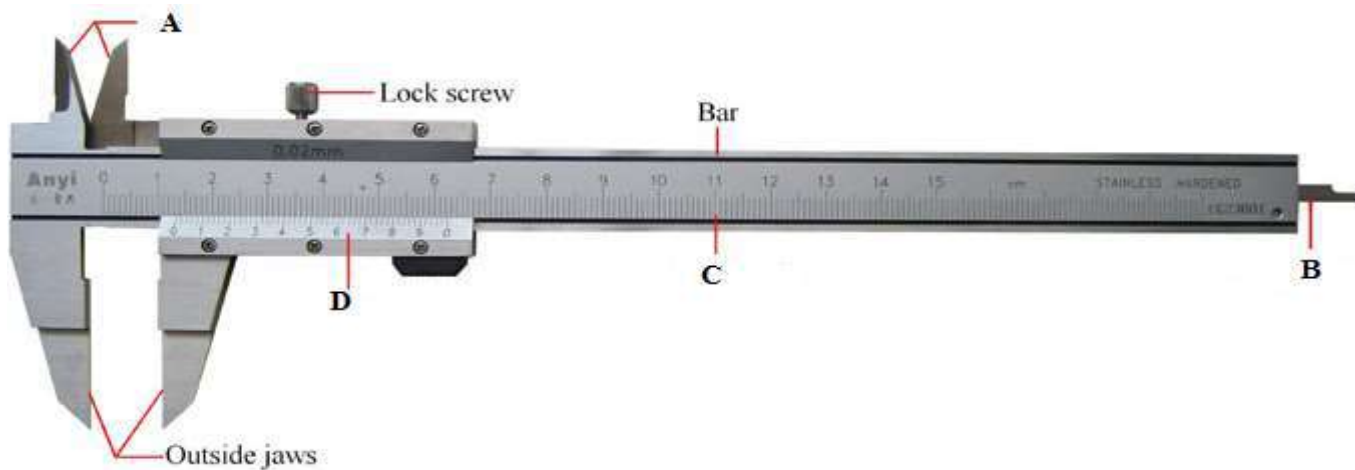
C- _____

(½ mark)

D- _____

(½ mark)

6. Identify the tool shown below and Label parts A - D



(a) Name of the tool

(1 mark)

(b) Label the parts below

Letters	Name of Part
A	
B	
C	
D	

(2 marks)

QUESTION B16

(10 marks)

1. Draw the sketch of each of the oxy acetylene flames.

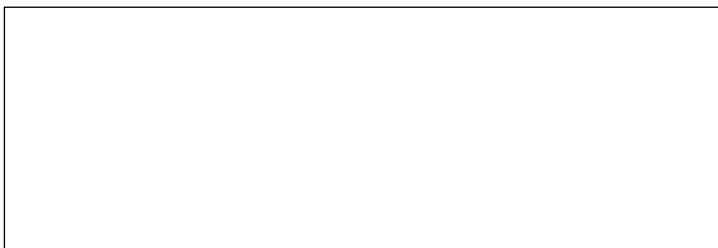
(a) Oxidizing flame

(1 mark)

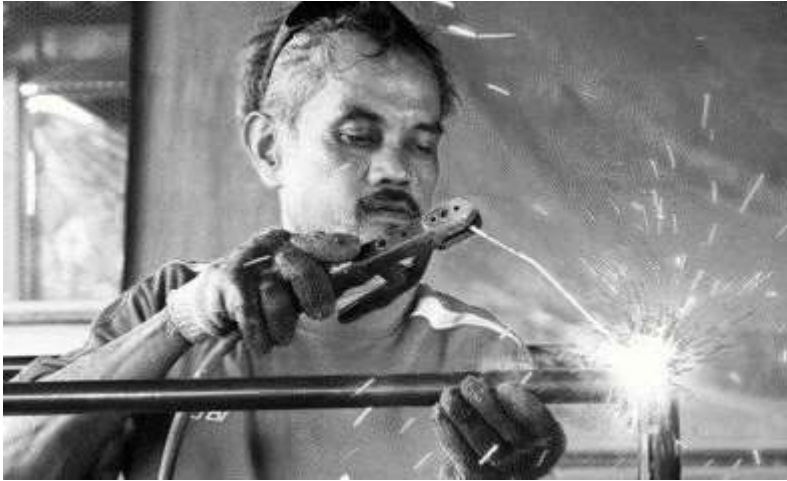


(b) Carburizing flame

(1 mark)

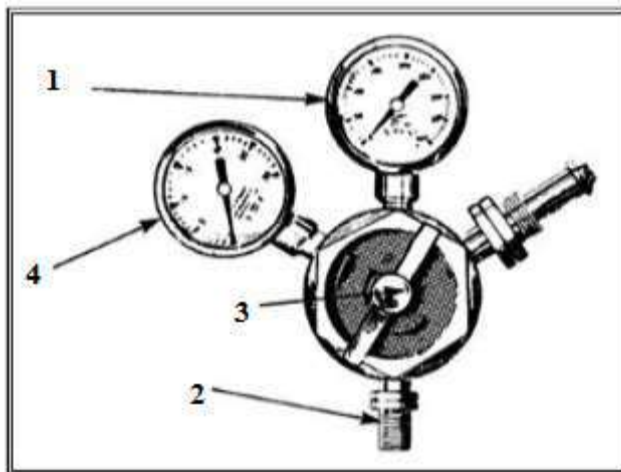


2. Identify **one** of the personal safety ignored by the worker shown in the picture below and explain why he should be observing the following safety procedure.



(2 marks)

2. Given below is the picture of the pressure guage of an oxy acetylene welding plant



(a) Name the parts labelled 1 and 2 in the diagram above.

Part 1 _____

(½ mark)

Part 2 _____

(½ mark)

(b) State the function of the part labelled 3.

Function of part 3

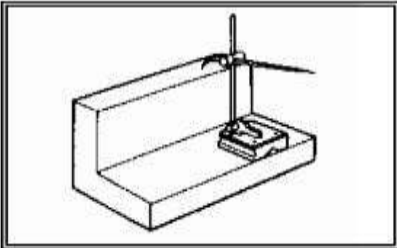
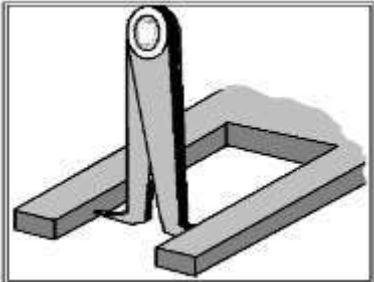
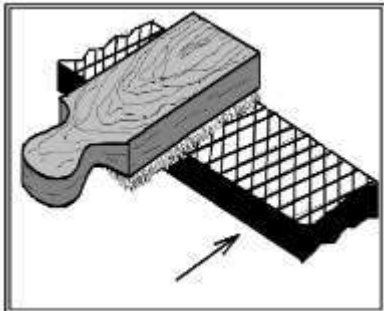
(1 mark)

(c) Explain what the gauge marked 4 indicates to the user.

(1 mark)

3. Identify the following tools in the diagram below.

(3 marks)

TOOLS	NAME
	Name _____
	Name _____
	Name _____

QUESTION B17**(9 marks)**

1. State **one** difference between a malleable and a ductile material and give an example of each.

(3 marks)

2. Metals are classified into four groups. An example of each metal is given in the table below, complete the table by identifying the group to which the metal belongs.

Ferrous metal	Non ferrous metal	Ferrous alloy	Non ferrous alloy
---------------	-------------------	---------------	-------------------

	Class of Metal	Example
1		Copper
2		Cast iron
3		Brass
4		Stainless steel

(4 marks)

3. Explain the heat treatment processes shown below

(a) Annealing

(1 mark)

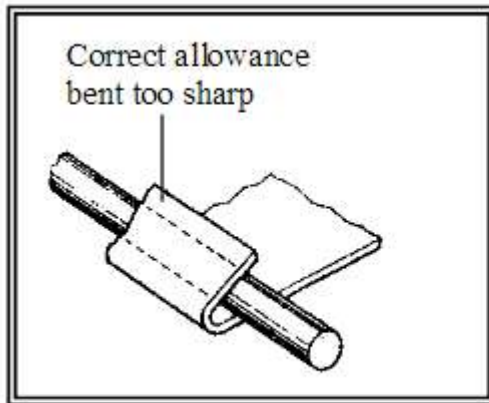
(b) Quenching

(1 mark)

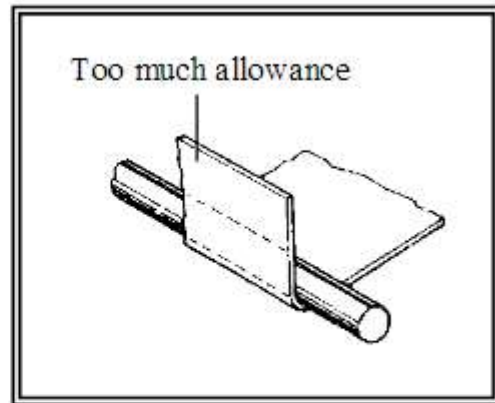
QUESTION B18

(7 marks)

1. The diagrams below show two different faults made when wiring a straight edge of a sheet metal. Answer the questions that follow.



(i)



(ii)

- (a) Name the type of edging shown above.

(1 mark)

- (b) Sketch the fault at the end of process shown in diagram (ii) above and explain.



(3 marks)

- (c) Identify **one** other type of metal edging technique used in sheet metal fabrication.

(1 mark)

2. Draw the following types of seams in the space provided.

Name	Diagram
Double hem seam	(1 mark)
Cap lock seam	(1 mark)

QUESTION B19

(9 marks)

1. Study the two thread marking tools shown below and answer the questions that follow.



(a) Name the parts labelled A and B

Part A _____

(½ mark)

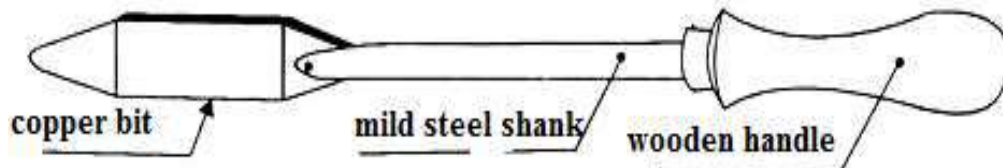
Part B _____

(½ mark)

(b) State the function of each tool shown above.

(1 mark)

2. Study the diagram given below and answer the questions that follow.



(a) Name the tool shown above.

(1 mark)

(b) Explain the function of the following parts of the tool:

(i) Copper Bit

(1 mark)

3. Explain **one** personal safety rules that must be followed while working in a metal workshop.

(1 mark)

4. Identify the types of fasteners below.



A _____

(1 mark)

B _____

(1 mark)

5. Explain the term metal finishing.

(1 mark)

6. Discuss **one** importance of metal finishing.

(1 mark)

DESIGN TECHNOLOGY**2017***For Candidate Use*

Number of extra sheets used.
 Write NIL if there are none.

FOR MARKER USE ONLY*Indicate the Major selected in Section B.*

Section		Exam Mark	Check Mark
A		50	
B	Major: _____	50	
TOTAL			