TONGA FORM SIX CERTIFICATE
2018
DESIGN TECHNOLOGY
QUESTION AND ANSWER BOOKLET

Time allowed: 3 Hours

INSTRUCTIONS:

1. Write your Student Enrolment Number (SEN) on the top right-hand corner of this page.
2. This examination has FIVE MAJOR AREAS. Each AREA is out of 70 skill level.

<table>
<thead>
<tr>
<th>MAJOR OUTCOMES</th>
<th>TOPICS</th>
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<tr>
<td>MAJOR AREAS</td>
<td>Choose ONE (Major 1 – Major 5)</td>
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<tr>
<td>1</td>
<td>WOOD TECHNOLOGY</td>
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<td>METAL TECHNOLOGY</td>
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<td>FOOD TECHNOLOGY</td>
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<td>TEXTILES AND GARMENT CONSTRUCTION</td>
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<td>TECHNICAL GRAPHICS</td>
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3. Answer ALL QUESTIONS. Write your answers in the spaces provided in this booklet.
4. Use a BLUE or BLACK ball point pen only for writing. Use a pencil for drawing if required.
5. If you need more spaces for answers, ask the supervisor for extra paper. Write your Student Enrolment Number (SEN) on each additional sheet, number the questions clearly and insert them in the appropriate places in this booklet.
6. Check that this booklet contains pages 2-71 in the correct order and that pages 69-71 has been deliberately left blank.

YOU MUST HAND IN THIS BOOKLET TO THE SUPERVISOR BEFORE YOU LEAVE THE EXAMINATION ROOM.
MAJOR AREA 1: WOOD TECHNOLOGY

A. Multiple Choice Questions:

Circle the letter of the BEST answer.

1. Softwood trees can be identified by

   A. broad leaves.
   B. seeds encased in cones.
   C. long green needle shaped leaves.
   D. seeds that are closed fruits.

2. Hardwood trees can be identified by

   A. losing their leaves in winter.
   B. broad green leaves.
   C. needle shaped leaves.
   D. closed fruits on the tree.

3. Identify the tool that could be used for the testing of timber flatness.

   A. Try Square.
   B. Marking Gauge.
   C. Sliding Bevel.
   D. Straight Edge.

4. Identify the name of the part labelled B of the hand tool given below.

   A. Stem.
   B. Stock.
   C. Blade.
   D. Handle.
5. The greatest timber shrinkage took place in the direction of the:

A. Growth Rings.
B. Medullary Rays.
C. Cambium Layers.
D. Sap Wood.

6. Identify the stage of the design process where “What remains to be done?” took place.

A. Investigating.
B. Devising.
C. Making.
D. Evaluating.

7. Identify the Stage of the design process where “Evaluate and document” took place?

A. Investigating.
B. Devising.
C. Making.
D. Evaluating.

8. Identify the Stage of the design process where “Model or trail the proposal” took place.

a. Investigating.
b. Devising.
c. Making.
d. Evaluating.
B. Short and Long Answer Questions:

Answer ALL the questions.

1. Design

Explain the outcome of your project that you used in your Internal Assessment (IA); Think about the outcome, did it meet the design brief? How well did it work? Could it be improved?

2. Manufactured Materials & Manufacturing Process

a. Name the appropriate uses of the following manufactured materials.

   i. Particle Board

   ii. Plywood
b. Identify the process for the manufacturing of Laminates.

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c. Briefly explain the processes for the manufacturing of Veneers Board.

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d. Briefly explain the processes for the manufacturing of Laminates.

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Skill level 3

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3. Characteristics and Properties of Timber

a. Moisture Content of Timber

i. Calculate the moisture content (MC) of a sample piece of timber weighs 230 grams. After oven trying, the weight of the timber goes down to 200 grams.

ii. State the application of the timber with the calculated moisture content in part (i).

b. Seasoning of Timber

i. Describe ONE (1) method of timber conversion.

ii. Explain the methods for the seasoning of timber.
iii. Analyse the problems that occur during seasoning.

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c. **Timber Conversion**

i. Describe **ONE** (1) method of timber conversion.

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ii. Briefly explain **ONE** (1) method for the conversion of timber you listed in part (i).

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d. **Preserving and Treatment of Timber**

i. Name **ONE** (1) method of the preservation and treatment of timber.

ii. Analyse the importance of preserving timber.
4. **Project**

Study the dining table below and answer the following questions:

![Dining Table Diagram](image)

a. Complete the table below with the total length of each component of the dining table.

<table>
<thead>
<tr>
<th>Table Parts</th>
<th>Size</th>
<th>Total Length (mm)</th>
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<tbody>
<tr>
<td><strong>Leg</strong></td>
<td>75 mm x 75 mm</td>
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<tr>
<td><strong>Rail</strong></td>
<td>75 mm x 25 mm</td>
<td></td>
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<tr>
<td><strong>Top</strong></td>
<td>100 mm x 25 mm</td>
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b. Use the information below and calculate the cost of the timber required for the dining table.

<table>
<thead>
<tr>
<th>Table Parts</th>
<th>Size</th>
<th>Material</th>
<th>Cost</th>
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<tbody>
<tr>
<td><strong>Leg</strong></td>
<td>75 mm x 75 mm</td>
<td>Hardwood Tawa</td>
<td>$8.50/m</td>
</tr>
<tr>
<td><strong>Rail</strong></td>
<td>75 mm x 25 mm</td>
<td>Hardwood Tawa</td>
<td>$4.30/m</td>
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<tr>
<td><strong>Top</strong></td>
<td>100 mm x 25 mm</td>
<td>Hardwood Tawa</td>
<td>$6.20/m</td>
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i. Cost of the 4 Legs

ii. Cost of the 4 Rails

iii. Cost of the Top

Total Cost of the timber for the Dining Table: ___________________

   c. Select another material that could be used for the top of the dining table.

   d. **Joints** and **Construction**

Suppose you use Mortise and Tenon joint to join the rail to the leg of the dining table.

Describe any **ONE** (1) tool needed for the construction of the joint.
5. Study the study desk given below and answer the following questions.

a. The study desk legs need to be turned from a 100mm x 100mm x 800mm timber to the required shape.

i. Analyse in the right order and in point form how to prepare and make the study desk leg to the required shape on a wood lathe machine.

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ii. List and evaluate all the cutting tools used in preparing and making the study desk leg to the required shape.

b. Name any wood finishing that could be used for the study desk.

c. Name any type of wood fasteners.
6. Study the diagram below and answer the following questions

a. Compare the differences between power tools and hand tools

b. Discuss in the right order the steps of construction and the tools and equipment used for each steps correctly and safely from timber preparation to joint cutting.
c. Evaluate the importance of understanding tools and its uses.

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MAJOR AREA 2: METAL TECHNOLOGY

A. Multiple Choice Questions

Circle the letter of the BEST answer.

1. State which of the following is an example of ferrous metal.
   A. Cast iron  
   B. Aluminium  
   C. Copper  
   D. Tin  

2. Identify the best type of welding machine for welding pipes.
   A. Oxy-Acetylene  
   B. Arc - Welding  
   C. MIG Welding  
   D. MAG Welding  

3. Name the part of the Oxy-Acetylene plant where oxygen and acetylene mix.
   A. Regulator.  
   B. Welding Tip.  
   C. Welding Hose.  
   D. Blow pipe.  

4. Identify what Stage of the design process where “What remains to be done” took place.
   A. Investigating  
   B. Devising  
   C. Making  
   D. Evaluating  

5. Identify what Stage of the design process where “Evaluate and document” took place.
   A. Investigating  
   B. Devising  
   C. Making  
   D. Evaluating
6. Identify what Stage of the design process where “Model or trail the proposal”
took place.

A. Investigating
B. Devising
C. Making
D. Evaluating

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B. Short and Long Answer Questions:

Answer ALL the questions.

1. Design

Explain the outcome of your project in your Internal Assessment (IA); think about the outcome, did it meet the design brief? How well did it work? Could it be improved?

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2. **Workshop Safety**

Study the cartoon below and answer the questions that follow.

---

a. Identify **ONE** (1) way in which boy **B** is neglecting common sense safety practice where he is working.

________________________________________________________________________
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b. Give **ONE** (1) reason why the grinding machine shown is dangerous that it should not be used.

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c. Briefly explain the uses of the cutting tools used by boy **D**.

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3. **Metal Classification & Molecular Structure**

   a. Define a Ferrous Metal.

   __________________________________________________
   __________________________________________________
   __________________________________________________

   b. Name **ONE (1)** molecular structure of metal.

   __________________________________________________
   __________________________________________________
   __________________________________________________

   c. Name **ONE (1)** non-Ferrous metal.

   __________________________________________________
   __________________________________________________
   __________________________________________________

   d. Evaluate the classification of metals.

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e. Describe **ONE** (1) process applied in producing steel.

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f. Evaluate the processes applied in producing steel.

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g. Evaluate the molecular structure of metal

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4. **Characteristics of Metal**

   a. Give **ONE** (1) physical property of metal.

   ______________________________________________________
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   c. Describe **ONE** (1) mechanical property of metal.

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   d. Classify the properties of metal.

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e. Evaluate the properties of High Speed Steel as most cutting tools are made out of.
5. Heat, Forging Process and Metal Finishing Process

a. Anvil is one of the tools used in forging process. Label the parts of the anvil indicated by letters A and B.

A: _____________________________

B: _____________________________

b. What is the use of the following forging tools during the forging process.

i. Tongs

Use: __________________________________________

__________________________________________
ii. Swages

Use: ____________________________

____________________________________________________

____________________________________________________

c. Briefly describe why we do tempering in the process of heat treatment of a chisel.

_______________________________________________________________________

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d. Name and evaluate ONE (1) type of metal finishing process

Name: ____________________________

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6. **Use of tools & equipment**

Study the diagram of the centre punch given below and answer the following questions. Lathe machine used to produce the centre punch.

![Diagram of Centre Punch](image)

**ALL MEASUREMENTS ARE IN mm**

a. Describe the uses of a lathe machine.

_______________________________________________________________________
_______________________________________________________________________
_______________________________________________________________________

b. Explain in point form how you make the centre punch using a lathe machine.

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c. List and explain all the cutting tools used in making the centre punch.

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d. List and explain all the measuring tools used in making the centre punch.

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e. If you are required to apply finishing on the centre punch, name and justify the type of metal finishing process used for the centre punch.

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f. Briefly explain the band saw and its uses.

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MAJOR AREA 3: FOOD TECHNOLOGY

SECTION A: Multiple Choices Questions:

Circle the letter of the BEST answer.

1. The energy value of five grams of protein is approximately
   
   A. 6 kilojoules  
   B. 17 kilojoules  
   C. 38 kilojoules  
   D. 85 kilojoules

2. The nutrient most likely to be inadequate in the diet of a pregnant teenager is
   
   A. iron.  
   B. calcium.  
   C. thiamine.  
   D. vitamin B12.

3. The metabolic process most characteristic of an individual in a period of high energy usage and low food intake is
   
   A. catabolism.  
   B. absorption.  
   C. anabolism.  
   D. oxidation.

4. High blood cholesterol increases the risk of
   
   A. gout.  
   B. anaemia.  
   C. osteoporosis.  
   D. heart disease.

5. Energy is vital for survival. Identify which of the following nutrients will supplement energy when energy food is lacking in the diet.
   
   A. Water  
   B. Protein  
   C. Mineral  
   D. Vitamins
6. A fatty food is said to be “off” if the fat is _______________.
   
   A. rancid  
   B. hydrated  
   C. emulsified  
   D. hydrogenated

7. Identify the term for enrichment and fortification of foods whereby the nutritional value of food is improved.
   
   A. Fermentation  
   B. Esterification  
   C. Nutrification  
   D. Dextrinization

8. Identify which of the following best describes food texture.
   
   A. Coarse, soft and mild  
   B. Fizzy, powder and flaky  
   C. Crispy, chewy and glossy  
   D. Crispy, grainy and smooth

9. Meals planned for the elderly should include food high in ____________.
   
   A. sugars and iron  
   B. sugars and fibre  
   C. calcium and fibre  
   D. protein and calcium

10. State which of the following micronutrients acts as a co-enzyme in the metabolism of protein.
    
    A. Riboflavin  
    B. Pyridoxine  
    C. Ascorbic acid  
    D. Nicotinic acid
SECTION B:   Short Answer Questions:

Answer ALL the questions.

1. Define the following concepts with examples from your study in Food and Nutrition.

   a. Producing:

   _________________________________________________________________
   _________________________________________________________________
   _________________________________________________________________

   b. High risk foods:

   _________________________________________________________________
   _________________________________________________________________
   _________________________________________________________________

   c. Design brief:

   _________________________________________________________________
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   d. Assimilation:

   _________________________________________________________________
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   e. Dietary fibre:

   _________________________________________________________________
   _________________________________________________________________
   _________________________________________________________________
2. Design an appropriate meal for an old man that is suffering from **GOITRE**.

3. Fats are a good source of Vitamins **A**, **D**, **E**, and **K**.
   a. State **ONE** (1) function of Vitamin **E**.

   b. Give **ONE** (1) food source of Vitamin **K**.
4. Study this case carefully then answer the following questions.

**A FAMILY MEAL**

Noa stood at the bench serving out the meals. A large steak for Vai, sausages for herself and the children. She piled chips on the children’s plates and hope that would fill them up. At least she knew the chips would be eaten. The children all liked chips and the frozen variety were so quick and easy to cook. Vai ….. well, he’d prefer a baked jacket potato with lashings of butter, but he’d eat the chips with no complains. Vegetables. How he looked forward to vegetables; dark green broccoli, pumpkin, beans and fresh green peas. Noa remembered how she used to help prepare the vegetables when she came home from school. But there never seemed to be enough time now to prepare vegetables. Even shopping was becoming a chore. She was tired – working all day, coming home late and having to prepare a meal for everyone. If it weren’t for Vai, she’d just pick up some frozen pizzas for the kids, but Vai likes his steak.

a. Describe the factors influencing Noa’s food choices.

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b. Identify **TWO** (2) foods Noa used that are energy dense.

i.  

ii.  

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c. Determine the “**RELATIVE IRON CONTENT**” of the meal for Noa, Vai and the children.

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d. As a Dietitian, explain ways to monitor the family’s meals to ensure that they keep a Healthy Nutritional Status.

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SECTION C: EXTENDED RESPONSE

Answer ALL questions in this section.

1. Study the pie graph given below and answer the questions that follow.

   ![Pie Graph: Distribution of Death in Tonga by Groups - 2007]

   a. Name any TWO (2) non-communicable diseases in Tonga.
      i. ____________________________________________________________
      ii. __________________________________________________________

   b. Compare the distribution of deaths between those caused by communicable diseases with those caused by non-communicable diseases and give a possible reason for the difference.
      ___________________________________________________________
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2. Differentiate between malnutrition and undernutrition.

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3. Explain why athletes require higher levels of protein in their diet.

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4. The Tanoa Plaza Hotel really encourages their staff on Hygienic practices in all aspects. Clearly describe the following practices for the staff to use.

a. Food hygiene:

b. Personal hygiene:

5. There is a wide variety of processed food available for consumers today.

a. Evaluate whether there is an increase or decrease in nutritive value of food products.
b. Discuss with specific examples when using additives and preservatives.

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6. Kitchens are where chef and assistants are 100% inspired.
   a. List **TWO** (2) characteristics of a safe kitchen floor.

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
   __________________________________________________________

   b. Describe why kitchen trash bins must be emptied daily.

   __________________________________________________________
   __________________________________________________________
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7. Part of the school responsibilities is to apply the Canteen Policy and Food Policy. Justify the importance of the School Canteen Policy.

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8. Describe ways to prevent food poisoning when storing and preparing food.

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9. Fresh designers use the design process effectively in product development. Draw the **Design Process**.
10. List **TWO** (2) important information needed while preparing a time and work plan for a cooking session.

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11. You have been requested to design a buffet dinner for your School Staff End of Year Celebration. You must provide for no more than 50 members.

a. Describe the factors that you must consider when selecting the dish for the buffet dinner.

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b. Calculate the cost of ingredients for one dish that you would prepare for the function.

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Skill level 4

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MAJOR 4: TEXTILES AND GARMENT CONSTRUCTION

A. Multiple Choices Questions:

Circle the letter of the BEST answer.

1. Pilling, which forms on the surface of fabrics will be more prominent in ________________.
   
   A. silk fabrics  
   B. linen fabrics  
   C. rayon fabrics  
   D. woollen fabrics

2. Examples of notions which add finishing touches to garments are ____________.
   
   A. zipper, elastic and scissors  
   B. press studs, lace and braids  
   C. elastic, buckle and tracing wheel  
   D. hooks and eyes, lace and tape measures

3. Identify is the term that enables a fibre to return to its original state after crushing.
   
   A. Absorbency  
   B. Durability  
   C. Resiliency  
   D. Elasticity

4. The fabric construction method that involves two or more fibres, joined together producing factors with dimensional stability, opaqueness and body is ________________.
   
   A. felting  
   B. knitting  
   C. braiding  
   D. bonding
5. State which of the following designs can be used to illustrate rhythm on a garment.

A. A created design
B. A repeated design
C. An applied design
D. A structural design

6. Fabric softeners are used in the washing of acrylic fabrics to

A. minimize ironing.
B. increase absorbency.
C. reduce static electricity.
D. enhance crease resistance.

7. The illusion created when using short diagonal lines on a person’s figure is

A. thinness.
B. smallness.
C. slimming look.
D. increased width.

8. An important factor to consider when selecting a pattern is to choose

A. styles that are the most expensive.
B. design lines that will give a stylish look.
C. design that is flattering to the figure type.
D. styles that have the most decorative features.

9. A fold of fabric which makes a 45° angle to the selvage will produce a

A. bias
B. weft
C. warp
D. true bias

10. Identify which of the following is NOT an element of design.

A. Lines.
B. Colour.
C. Texture.
D. Balance.
SECTION B: Short Answers Questions:

Answer ALL the questions in this section.

1. Define the following terms correctly.

   a. Cotton:

      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________

   b. Free-hand cutting pattern:

      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________

   c. Design brief:

      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________

   d. Investigating:

      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________

   e. Design Process:

      ____________________________________________________________
      ____________________________________________________________
      ____________________________________________________________
f. Manufactured fibres:

2. Complete the table below to display the differences in design desires for the given figure types.

<table>
<thead>
<tr>
<th></th>
<th>Very small and chubby</th>
<th>Very big and skinny</th>
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</thead>
<tbody>
<tr>
<td><strong>Colour to be used.</strong></td>
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<tr>
<td><strong>Purpose of clothing.</strong></td>
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<tr>
<td><strong>Lines to be used.</strong></td>
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3. Describe the importance of the following in constructing a garment.
   
a. Basting:

   2
   1
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   NR

   b. Stay-stitching:

   2
   1
   0
   NR

   c. Darts:

   2
   1
   0
   NR

4. Explain the purpose of using the following techniques in sewing.
   
a. Clipping:

   2
   1
   0
   NR

   b. French seam:

   2
   1
   0
   NR
SECTION C:  Extended Response Questions:

Answer ALL questions in this section.

1. Study the picture given below and answer the questions that follow.

a. Evaluate the quality of the garment in the picture in terms of how the Elements and Principles of Design were used successfully and / or ineffectively.

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b. Explain how design is used to emphasize the body features such as an attractive face and attractive legs.

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c. State **ONE** (1) effect of coarse or rough fabrics on a figure.

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2. Within a culture, there are variations in dress and costume. Explain how an individual’s cultural role influences his or her way of dressing or costume.

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</table>
3. Describe how to handle these problems when using the sewing machine.
   
a. breaking needle thread:
   
   [Skill level 2]
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   b. skipping of stitches:
   
   [Skill level 2]
   2
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4. Discuss the importance of balance on a design.

   [Skill level 4]
   4
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5. Read the extract given below and answer the question that follow.

“A lot of women see pretty dresses on young models and immediately think they can wear them, but you really must think about your body proportions before you select a style for yourself”.

Discuss the reason for the phrase “.... you really must think about your body proportions before you select a style for yourself ”.

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Skill level 4
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6. A Heilala Festival female contestant wishes to wear a winner’s attire for the crowning night.

a. On the figure provided:
   - Sketch the front view of the dress.
   - Label all the design lines.
   - Identify all emphasis made on this dress front view.
b. Explain the importance of lines in the dress design.

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7. Discuss the importance of using proper electric cord for the safety of operating the sewing machine.

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c. Give a suitable fabric for the dress and the reason for your choice.

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8. Give the appropriate way of removing the following stains.

   a. fresh blood stain on a brand new garment.

   b. mildew stain on a white shirt.

   c. fresh chewing gum on a short pants.

9. Discuss the importance of an instructional paper in the commercial pattern envelope.
MAJOR AREA 5: TECHNICAL GRAPHICS

A. Multiple Choice Questions

Circle the letter of the BEST answer.

1. Identify the drawing where 30° is use for projection.
   A. Perspective drawing.
   B. Orthographic drawing.
   C. Isometric drawing.
   D. Oblique drawing.

2. Identify the Stage of the design process where “What remains to be done” took Place.
   A. Investigating.
   B. Devising.
   C. Making.
   D. Evaluating.

3. Identify the Stage of the design process where “Evaluate and document” took Place.
   A. Investigating.
   B. Devising.
   C. Making.
   D. Evaluating.

4. Identify the Stage of the design process where “Model or trail the proposal” took place.
   A. Investigating.
   B. Devising.
   C. Making.
   D. Evaluating.
B. **Short and Long Answer Questions.**

Answer ALL the questions

1. **Design**

   a. Describe the stages of the design process

   __________________________________________________________
   __________________________________________________________
   __________________________________________________________
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   __________________________________________________________

   b. Explain the outcome of your project that you used in your Internal Assessment (IA); Think about the outcome, Did it meet the design brief? How well did it work? Could it be improved?

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2. **Standard Lines & Symbols**

   a. Complete the Table below with **ONE** (1) application of the line types.

<table>
<thead>
<tr>
<th>Line Types</th>
<th>Line Application</th>
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<tbody>
<tr>
<td>i. Continuous Thin Line</td>
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<td>ii. Thin Dashed Line</td>
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<tr>
<td>iii. Thick Chain Line</td>
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<tr>
<td>iv. Chain Line, Thick at the ends and at change of direction nut Thin elsewhere</td>
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b. Complete the table below by the name of the following technical drawing symbols.

**Engineering Drawings:**

<table>
<thead>
<tr>
<th>Technical Drawing Symbols</th>
<th>Name of the Technical Drawing Symbols</th>
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<tbody>
<tr>
<td>![Image of R symbol]</td>
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<tr>
<td>![Image of C symbol]</td>
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<td>![Image of cone symbol]</td>
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3. **Interpenetration of Solid**

Given below is the plan and incomplete elevation of interpenetration Cylinders.

a. Identify the procedures of solving intersection of solids.

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b. Complete the elevation below showing the intersection of the cylinders. Show all construction lines.
c. Draw **ONE** (1) complete turn of a left-handed square section spring, 40 mm outside diameter, 60 mm pitch, made from 5 mm square bar.
4. **Vector Diagrams & Forces:**
   a. Describe the following terms.
      
      i. Wind load
         
         ____________________________________________________________
         ____________________________________________________________
         ____________________________________________________________
         ____________________________________________________________
         ____________________________________________________________
         
      ii. Dead load
         
         ____________________________________________________________
         ____________________________________________________________
         ____________________________________________________________
         ____________________________________________________________
         ____________________________________________________________
         
   b. Determine the resultant force and its point of application of the co-planar and non-concurrent force system given below.

   ![Vector Diagram](image)
c. Given below is the Space diagram of parallel forces acting on a beam. Use the Link or Funicular and Force or Load line with Polar diagram to determine the:

i. Position of the resultant

ii. Reaction at the supports RL and RR

\[ \text{25 N} \quad \text{15 N} \quad \text{30 N} \]

\[ \text{RL} = \underline{\text{______}} \quad \text{RR} = \underline{\text{______}} \]

Scale: \underline{\text{______________}}
5. **Geometrical Construction & Development**

a. Study the Bushed Roller Block given below and answer the following questions.

If you are asked to draw the given Bushed Roller Block using 2 : 1 scale.

i. Identify the total length of the scaled diagram. ____________

ii. Identify the total width of the scaled diagram. ____________

iii. Identify the total height of the scaled diagram. ____________
b. Bisect angle ABC

![Diagram of angle ABC]

B

C

A


c. Identify the meaning scale 1 : 2.

_________________________________________________________________________

_________________________________________________________________________


d. Compare one point and two point perspective drawing.

_________________________________________________________________________

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_________________________________________________________________________
e. Study the given square pyramid and answer the following questions.
   i. Find the true length of the given sides of the square pyramid using rotation method.

   ![Diagram of a square pyramid with labeled sides](image)

   
   1a = _______________
   2b = _______________
   3c = _______________
   4d = _______________

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ii. Draw the development of the given square pyramid using the triangular method.
f. Draw a regular pentagon with 35 mm.
6. **True Shape, Orthographic and Assembly Drawing**

a. Projection of the triangle ABC onto the horizontal and vertical planes is given below. Use any method of your choice to determine the true shape of triangle ABC and true angle of inclination.
b. A CI Jaw Support is given below. Draw, with hidden details, the following views of the **CI Jaw Support** in **Third Angle Projection**:

i. A front view from direction A

ii. A side view from direction B, and

Use any scale of your choice, give 6 main dimension, and identify the drawing.

---

**CI JAW SUPPORT**
DO QUESTION CI JAW SUPPORT IN THIS PAGE
c. **Simple Assembly Drawing**

Below is an exploded front view of a CI Support Bracket

Draw the sectional assembly front view of the CI Support Bracket, taking into consideration the shaft, bushes and the web.
DO QUESTION CI SUPPORT BRACKET IN THIS PAGE

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