

0708021/2&1 BBEKO  
August 2021  
BASIC DESIGN AND  
TECHNOLOGY  
(HOME ECON. 2&1)  
Essay & Objective  
1 hour 55 minutes

# 2 & 1

Name .....

Index Number.....

Signature .....

Date of Examination .....

## BEST BRAIN EXAMINATIONS KONSORTIUM GHANA

### Special Private Mock Examinations For BECE Candidates

August 2021

BASIC DESIGN AND TECHNOLOGY  
(HOME ECONOMICS 2 & 1)  
[100 marks]

1 hour 55 minutes

Write your **name and index number** in ink in the spaces provided above.

This booklet consists of two papers. Paper 2 is in two sections: **A** and **B**. Answer **three** questions only: **Question 1** in section **A** and **two** questions from section **B** using the spaces provided in this question paper. Paper 2 will last **1hr. 15 minutes**. Answer Paper 1 on your objective Test answer sheet.

Do not start the paper 1 until you are told to do so. Paper 1 will last **40 minutes**.

At the end of the examination, you should submit the **entire** question paper to the invigilator.

Any candidate who tears off any part of the question paper will be **severely penalized**.

Whether you answer all the questions in this paper or not, hand in the **entire** question paper to the invigilator.

Credit will be given for clarity of expression and orderly presentation of material.

## HOME ECONOMICS

For Examiner's Use Only	
Question Number	Mark
<b>TOTAL</b>	

[3 marks]

(ii) Mention **two** signs of dehydration in the human body.

[2 marks]

(b) State **three** ways of making a good patch.

[3 marks]

(c) *Design and construct a unit for keeping files and papers at your school office.*

Study the design brief above and write **one** specification each on:

(i) *Material;*

(ii) *Cost;*

(iii) *Ergonomic;*

[4 marks]

(d) Suggest **three** ways of repairing weak household furniture.

[3 marks]

(e) State **three** precautions to be taken when using electric appliances.

[2 marks]

(f) Differentiate between *Contrasting colours* and *complementary colours* with examples.

[3 marks]

SECTION B  
[50 marks]

*Answer two questions only from this section  
All questions carry equal marks*

2. (a) Write down **five** steps involved in doing freehand cutting.

Turn over

[5 marks]

(b) Give **three** disadvantages of freehand cutting

[3 marks]

(c) State **four** uses of sleeves.

[4 marks]

(d) Complete the passage below by filling in with words selected from the following list:

*close-fitting; slits ; zip; fastening; garments;*

Openings are ..... or cuts that are intentionally made on .....  
or articles to allow them to be sewn in ..... style and to be put on and removed  
easily and quickly. They are made according to the type of ..... to be used on  
them. Openings which overlap are known as slit openings and ..... openings.

[5 marks]

(e) Give **two** qualities of good openings.

[5 marks]

3. (a) Give **four** disadvantages of frying foods.

[4 marks]

- (b) Mention **four** rules to observe in using frying as a cooking method.

[4 marks]

(d) (i) What is *pressure cooking*?

(ii) Give **three** advantages of pressure cooking.

[5 marks]

(e) Give **four** advantages of baking.

[4 marks]

(f) Give **four** disadvantages of baking

[4 marks]

4. (a) Outline **five** steps to take in preparing a fabric before cutting out.

[5 marks]

- (b) State **three** benefits of developing basic skills in cutting out designs without patterns.

[3 marks]

- (c) (i) What is a *Treadle machine*?

[5 marks]

(d) In what **three** ways can fruits be stored?

[3 marks]

(e) Outline **five** points you will consider when purchasing vegetables

[5 marks]

(f) Give **four** benefits of the stewing method of cooking.



Answer all the questions.

Each question is followed by four options lettered A to D. Find the correct option for each question and shade in pencil on your answer sheet the answer space which bears the same letter as the option you have chosen. Give only one answer to each question. An example is given below.

Which of the following is not a property of aluminum?

- A. Light in weight.
- B. It corrodes.
- C. Absorbs heat readily.
- D. It is a good conductor of electricity.

The correct answer is It corrodes, which is lettered B and therefore answer space B would be shaded.

A

B

C

D

Think carefully before you shade the answer spaces; erase completely any answer you wish to change.

Do all rough work on this question paper.

Now answer the following questions.

1. Food spoilage is usually caused by
  - A. overheating.
  - B. enzymes and bacteria.
  - C. refrigeration.
  - D. too much water.
2. In working hand sewing stitches, you need to
  - A. wear gloves on the fingers.
  - B. learn to use any stitch for the work at hand.
  - C. choose suitable type of thread for the fabric.
  - D. start your stitch with a knot.
3. Colour is very important for
  - A. oral communication
  - B. visual communication
  - C. written communication
  - D. musical communication.
4. A good packaging material must not
  - A. serve the purpose for which it is being used.
  - B. be durable.
  - C. be more expensive than the product.
  - D. suit the item being packaged.
5. When patching a garment, it is important to ensure that
  - A. the patch is as weak as possible.
  - B. any fabric is used.
  - C. you use any thread of choice.
  - D. you match the grains of the patch with that of the article.
6. The best way to handle electrical appliances is
  - A. switch them off after use.
  - B. soak them in water when dirty.
  - C. connect all appliances on one socket.
  - D. disconnect fuse before use.
7. A labor-intensive worker needs a lot of
  - A. protective foods.
  - B. body-building foods
  - C. energy-giving foods
  - D. water.
8. A poorly preserved food may be seen by a sign of
  - A. growth of mould on its surface.
  - B. pleasant aroma.
  - C. colourlessness.
  - D. fresh aroma.

9. Development of an object is the spreading out of the surface to obtain the
- perimeter.
  - area.
  - true length.
  - true shape.
10. Which of the following gives the required information for making a design?
- Operational sequence
  - Exploded view
  - Specification
  - Investigation.
11. The opposite of red on a six-point colour wheel is
- brown.
  - green.
  - violet.
  - orange.
12. Food preservation is important in order to
- provide variety in food.
  - prolong its life span.
  - shorten its cooking time.
  - kill germs.
13. The statement describing the problem in designing is referred to as
- investigation.
  - analysis.
  - situation.
  - brief.
14. Drawing involves the use of
- dots.
  - strokes.
  - smudges.
  - lines
15. Buttons are also used for
- keeping the seam very even.
  - allowing the thickness of the overlap.
  - decorating garments.
  - threading to the wrong side of a garment.
16. Which of these is advisable when frying foods?
- Use a perforated spoon to lift food
  - Put food into oil only when it is hot
  - Fill up every space in the pan with pieces of food
  - Fill up the pan half way with oil
17. A piece of cloth is kept beneath the feed-dog in a sewing machine to
- collect excess oil
  - keep the needle always sharp.
  - prevent dirt.
  - ensure accurate stitching
18. Collars are usually found on
- shirts.
  - brassiers.
  - skirts.
  - trousers.
19. Interlacing are used in collars and cuffs to
- stiffen them.
  - decorate edges.
  - give them body
  - close opening and timings

20. Which of the following points is **not** necessary to consider when buying a piece of cloth to sew?  
 A. It should be suitable for the style of the garment.  
 B. It should be easy to wash.  
 C. It does not need to be suitable for the wearer.  
 D. It should be easy to work with
21. In order to straighten the edges of a fabric before cutting out, you need to  
 A. trim it.  
 B. shrink it.  
 C. Grain it.  
 D. press it.
22. In freehand cutting, one mistake to avoid is  
 A. visualizing the kind of garment to sew.  
 B. sketching a specific style of the garment on paper.  
 C. disregarding the body measurement of the wearer.  
 D. estimating the quantity of garment required.
23. Burning wool has the smell of  
 A. celery.  
 B. mulberry.  
 C. burning paper.  
 D. burning hair.
24. Which of the cook wares cooks faster thereby saving time and fuel?  
 A. steel.  
 B. copper.  
 C. enamel.  
 D. Aluminum
25. The hand sewing machine is suitable for beginners because  
 A. it is expensive.  
 B. it has light on it to throw on work.  
 C. it is suitable for left-handed people.  
 D. it is easy to use.
26. The balanced wheel is that part of a sewing machine that  
 A. controls the movement of the take-up lever and needle.  
 B. controls the flow of thread in the needle.  
 C. controls the movement of fabric under the presser foot backwards.  
 D. controls the length of stitches
27. The best way of obtaining the maximum nutrients from fruits is by  
 A. eating them raw.  
 B. pureeing them.  
 C. baking in a pie.  
 D. boiling them.
28. Which of the following kitchen equipment does **not** use electricity?  
 A. A sink  
 B. A refrigerator.  
 C. An oven  
 D. A rice cooker
29. Accidents may be caused in the kitchen by  
 A. lack of concentration.  
 B. good arrangement.  
 C. cleaning working tables.  
 D. adequate attention.
30. The first stage in the threading of sewing machine is to place the reel of the thread on the  
 A. balance wheel.  
 B. spool pin.  
 C. tension disc.  
 D. take-up-lever

**BEST BRAIN EXAMINATIONS KONSORTIUM**  
**SPECIAL MOCK EXAMINATIONS FOR BECE CANDIDATES –AUGUST 2021**  
**MARKING SCHEME –BDT HOME ECONOMICS**

**PAPER II [70 MARKS]**

**QUESTION ONE | COMPULSORY**

- (a) (i) **SIGNS OF MALNUTRITION**
- Lack of appetite
  - Tiredness/weakness
  - Growing lean/ loss of weight
  - Getting sick often
  - Retarded growth.
  - Swollen stomach.
- Dark patches on skin  
Hair becomes reddish,  
The victim looks miserable  
Depression  
Etc  
**[3 marks @ 1 mark each]**
- (ii) **SIGNS OF DEHYDRATION**
- Wrinkled skin;
  - Little urine;
  - Yellowish urine;
  - Loss of weight;
  - Sunken eyes;
- Indigestion/ Constipation;  
- Headache  
- Etc  
**[3 marks @ 1 mark each]**
- (b) **WAYS TO MAKE A GOOD PATCH**
1. Choose fabrics that match the article in colour/texture/design.
  2. Use threads that match the article
  3. Match the grains of the patch with that of the article.
  4. Make the patch flat
  5. Make the patch neat
  6. Make the patch strong
- [3 marks @ 1 mark each]**
- (c) **WRITING ONE SPECIFICATION EACH ON:**
- (d) **Material** - the unit should be made of mahogany, sapele, mild steel, etc
- the materials for making the unit are available
  - the material should be durable
- (i) **Cost** - The unit should be affordable
- The unit should not take more than to produce
  - The cost of product should not be high
- (ii) **Ergonomics** - The unit should be used at office
- The unit should be portable
  - The unit should be used by school administrators
- (iii) **Construction** - The unit should be constructed by an expert
- The construction of the unit does not require any special tools
  - The unit should be constructed in the workshop
- [4 marks @ 1 mark each]**
- (d) **WAYS OF MAINTAINING WEAK HOUSEHOLD FURNITURE**
- Replace all missing nails
  - Reconstruct broken tongue
  - Apply enough glue to hold furniture parts firmly
  - Tighten loose bolts and nuts or screws
  - Etc.
- Any 3 correct x 1 each = 3 mark**
- (e) **THREE PRECAUTIONS TO BE TAKEN WHEN USING AN ELECTRIC APPLIANCE**
- Do not touch or plug an electric appliance with wet hand.
  - Read and follow all the instructions written on the appliance.
  - Switch off appliance when not in use.
  - Avoid using an appliance that has wires that not insulated.
  - Etc.
- 1 each x 2 = 2 marks**
- (f) **CONTRASTING COLOURS AND COMPLEMENTARY COLOURS.**
- Contrasting colours are colours that do not relate to each other in anyway. E.g. orange and blue
  - Complementary colours are colours which are directly opposite on the colour wheel. E.g red and green, blue and orange, yellow and violet.
- 1½ each x 2 = 3 mark**

**SECTION B [50 MARKS]**

## QUESTION TWO

### (a) STEPS INVOLVED IN MAKING FREEHAND CUTTING.

1. Visualize the kind of garment you intend to sew
2. Make a sketch of a specific style of the garment on paper
3. Make reference to the body measurements of the wearer of the garment
4. Estimate the quantity of fabric required for the garment based on the measurement.
5. Using the appropriate tools, cut out the design on fabric according to specific style and measurements given **5 marks**

### (b) DISADVANTAGES OF FREEHAND CUTTING

- Freehand cutting does not teach the economic way of cutting out because excess allowance is given to ensure that the finished garment fits.
- It wastes fabric.
- It is not easy for beginners because they do not have the skills of accuracy and precision which are needed for freehand cutting.
- Mistakes made during cutting out cannot be easily corrected and may result in loss of fabric.
- It is difficult to estimate the exact quantity of fabric required.
- It is sometimes difficult to match motifs and lines
- It can cause anxiety for beginners
- There are no patterns for future use of the particular style
- Designs of different sizes cannot be cut at a time.
- It is difficult to learn.

[3 marks @ 1 mark each]

### (c) USES OF SLEEVES

- It keeps the body warm
- It protects the arm.
- It adds to the size of the wearer. E.g. slim person wearing puff sleeves.
- It covers blemish marks. E.g. shirt sleeves
- It helps to finish the arm hole of a garment or to complete the edge of the armhole.

[4 marks]

### (d) COMPLETE THE PASSAGE BELOW BY FILLING IN WITH WORDS

Openings are slits or cuts that are intentionally made on garments or articles to allow them to be sewn in close-fitting style and to be put on and removed easily and quickly. They are made according to the type of fastening to be used on them. Openings which overlap are known as slit openings and zip openings.

[5 marks]

### (e) QUALITIES OF GOOD OPENINGS

- Openings should be suitably placed on the garment depending upon the type of garment and closeness of fit.
- They should be flat and made on double fabric.
- Openings should be strongly made.
- There should be sufficient under wrap to prevent gaping.
- Both sides of the openings should be of the same length.

1 mark each x 2 = 2 marks

### (f) OUTLINE THE STEPS TO TAKE IN FIXING BUTTONS

- Make a few back stitches on the right side of the garment for a strong beginning.
- Bring the needle up through a hole in the button.
- For buttons without a shank, place a match stick across the button and put the needle into the second hole through the material to the wrong side
- Continue in this way until the button is strongly sewn
- Remove the match stick, this leaves a loose end between the button and the material.
- Wind a thread on this end beneath the button until it is firm and a make a shank
- Take the thread through to the wrong side and fasten off

[5 marks]

TOTAL = 25 MARKS

## QUESTION THREE

### (a) DISADVANTAGES OF FRYING FOODS

- It is an expensive method of cooking.
- It requires constant attention.
- Fried foods do not digest easily and so can cause indigestion
- When cold, most fried foods become unappetizing and insipid
- Extra care is needed to prevent accidents
- It is not a suitable method for children, old people and sick people.

[4 marks @ 1 mark each].

(b) **RULES TO OBSERVE IN FRYING**

- Do not fill the pan more than half – way with oil or fat.
- rise when food is placed in it
- Do not drop the food into oil or fat as it will splash and cause burns
- Heat the fat to the require temperature
- Do not over fill the pan
- Etc.

2 marks@ ½ mark each

(c) **FUNCTIONS OF FATS**

- Provides heat and energy
- Satisfies hunger
- Carries fats soluble vitamins to the tissue
- Fats serves as reserved fuel
- Protects vital organs in the body .

4 marks@ 1 mark each

(d) (i) **PRESSURE COOKING**

It is a quick method of cooking food in steam under pressure with a device called pressure cooker. When the temperature rises the pressure also increases and the steam produced cooks the food within a short time. 2 mark

(ii) **ADVANTAGES OF PRESSURE COOKING.**

- It is a quick method of cooking food.
- It does not need much attention.
- Device is portable.
- Saves fuel, time.
- Nutrients are retained.
- Tough cut meat is cooked and softened fast.

1 each x 3= 3 marks

(e) **ADVANTAGES OF BAKING.**

- Baked foods look attractive and appetizing
- The nutrients in the food are retained
- Baked foods stay longer
- It is economical on fuel as more than one dish can be baked at a time
- Food does not break up, but keeps its shape
- Etc.

1 each x 4 =4 marks

(d) **DISADVANTAGES OF BAKING.**

- It requires constant attention, else food will burn
- It wastes fuel in heating the oven
- Extra care is needed to prevent accidents
- Baked foods digest slowly.
- Etc.

1 each x 4 =4 marks

**TOTAL = 25 MARKS**

**QUESTION FOUR**

(a) **HOW TO PREPARE A FABRIC BEFORE CUTTING OUT**

- Straighten the fabric by ironing and graining.
- Check fabric for faults e.g. tears and avoid them when folding for cutting out.
- Fold the fabric into two with right sides together; selvedge to selvedge
- Measure 10 cm or 4 inches from the selvedge (overlap facing), if there is an opening
- Pin tack to hold fabric together in position.

5 marks @ 1 marks each

(b) **BENEFITS OF DEVELOPING BASIC SKILLS IN CUTTING OUT DESIGNS WITHOUT PATTERNS.**

- It is quicker method than drafting a design patter.
- It involves no complex drafting problems and fewer pins are used.
- It saves time and money as there will be no need to purchase commercial patterns
- A variety of simple designs can be created with freehand cutting
- It is easier for illiterates since they cannot read and understand pattern marking and instructions
- Correct and actual body measurements are used as compared to commercial patterns which use standard measurements.
- It is not expensive as there is no need to buy paper patterns.
- It saves energy
- It is the best way of keeping trade secret
- It is suitable for commercial sewing
- It improves creativity since varieties of new designs can be created

3 marks @ 1 mark each

(c) (i) **TREADLE MACHINE** is a sewing machine fixed to a table with stands and operated by the foot 2 marks

(ii) **THREE BENEFITS OF USING A TREADLE MACHINE**

- It works faster than the hand-sewing machine
- It suitable for tailors who are left-handed
- It allows the use of both hands to guide the fabric being worked on
- Some can do embroidery work which hand sewing machine cannot do
- The top of machine can be turned into table

3 marks @ 1 mark each

(d) **IN WHAT THREE WAYS CAN FRUITS BE STORED?**

- Fruits should be stored in a very dry atmosphere.
- refrigerate ripped fruits
- Keep under ripped fruit at room temperature in paper bag.
- Etc.

[1 mark each x3 = 3 marks]

(e) **POINTS TO CONSIDER WHEN BUYING VEGETABLES**

- It should be free from signs of decay.
- Purchase enough needed for a day.
- It should be free from insect attack.
- It should be crisp and fresh.
- The mid-rib of leafy vegetables such as ("kontomire") should snap sharply when broken
- Should have natural colour
- No holes in them
- Firm to touch/ should not wither
- Vegetables like beans should not leave powder on fingers
- Vegetables should be free from pests
- Should have no cuts or bruises
- Should have bright colour.
- Should be free from insects' attack, e.g. maggots
- Should be clean and free from soil and stones
- The vegetable should be fresh
- The skin should be smooth
- The vegetable should not be over-ripe
- Should not be wrinkled
- Should not have bad smell
- Etc.

[1 each x 5= 5 marks]

(f) **BENEFITS OF THE STEWING METHOD OF COOKING**

- It is suitable for tough cuts of food
- It makes food very tasty and attractive
- Foods are appetizing
- Fried foods can be kept for a long time
- Fried foods are heavy so prevents one from going hungry for a long time
- All nutrients and juices are retained except vitamin C
- Does not need constant attention
- Food has good flavor
- Food looks colourful and attractive
- It is economical
- Etc.

[1 each x 4= 4 marks]

**PAPER I [30 marks]**

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