

Name.....

Index No.....

Candidate's sign.....

Date.....

441/ 1
HOME SCIENCE
(THEORY)
Paper 1
March/April, 2020
2 ½ Hours

POST EVALUATION EXAMINATION

Kenya Certificate of Secondary Education

441/ 1

HOME SCIENCE
(THEORY)

Paper 1

March/April, 2020

2 ½ Hours

Instructions to candidates

1. Write your name and index number in the spaces provided above.
2. Sign and write the date of the examination in the space provided
3. This paper consists of three sections A, B and C.
4. Answer all questions in Section A and B and any TWO questions from section C
5. Answers to all questions must be written in this booklet
6. This paper consists of 10 printed pages.
7. Candidates should answer the questions in English.

FOR EXAMINER'S USE ONLY

SECTION	QUESTION	MAXIMUM SCORE	CANDIDATE'S SCORE
A	1 – 40	40	
B	41a, b	20	
C	42	20	
	43	20	

	44	20	
	TOTAL	100	

MARKING SCHEME SECTION A: (40 MARKS)

Attempt ALL questions in this section. Write answers in the spaces provided

1. Give **two** measuring tools in needlework. (1 mark)
 - Tape measure
 - Measuring gauge
 - Metre stick/rule

2. Point out the major difference of cotton and wool viewed under a microscope (1 mark)

Cotton is seen flat, twisted ribbon like, while wool is seen overlapping with irregular scales on the longitudinal view.

Cotton is kidney shaped, while wool is circular/round on the cross-sectional view

3. Explain the term dredge as used in flour mixtures (1 mark)

To sprinkle lightly with powder using a perforated container (flour, salt, pepper, castor, sugar)

4. Give **two** uses of salt in laundry work (1 mark)
 - Fix colour in loose coloured clothes**
 - Dissolve mucus and blood stains**
 - Disinfect**
 - Prevent fruits stains from spreading**

5. What is consumer education (1mark)

It is information that makes people aware of goods and services available and their rights as Consumers to avoid being exploited.

6. Outline two major signs of goiter (1 mark)
 - Enlargement of the thyroid gland
 - Irritability
 - Weight loss
 - Change of eating habits (1 mark)

7. Suggest **two** other methods of storing clothes and household linen apart from folding =--
 - hanging
 - rolling (1 mark)

8. State **two** factors that make biogas an unpopular fuel.
 - high cost of installation
 - Requires a large space for setting up

- Has a bad smell** (1 mark)
- 9. Give **two** reasons for serving water in a meal (1 mark)
 - Aids in the digestion**
 - Management of choking**
 - Clear throat**
- 10. Describe how you would store maize flour in the kitchen (1 mark)
 - Store in covered clean dry container with a well-fitting lid.**
 - Container should be put on a raised ladder in a cool dry place**
- 11. Outline **two** advantages of using a potato peeler over a kitchen knife. (1 mark)
 - It does not cut deep into the potato or carrot hence minimize waste.**
 - Lessens the risk of cutting one's fingers**
 - Its fast, saves on time**
- 12. Give **two** suggestions for painting your ceiling boards with a light colour. (1 mark)
 - To reflect light more into the house**
 - To improve its appearance**
 - Give an illusion of increased heights of the ceiling**
 - To give a warm effect**
- 13. Elastic fibres are used to make foundation garments. Give **two** examples of such garments (1 mark)
 - Cossets**
 - Bikers**
 - Brassieres**
 - Support hosiery**
- 14. Note down **two** effects of deep-frying protein foods without coating (1 mark)
 - Burnt products**
 - Loss of food extracts**
 - Oil sogged food**
 - Broken or flacking food**
- 15. State **two** advantages of choosing boiling as a method of cooking (1 mark)

- It softens tough foods
 - It does not need a lot of skills
 - The liquid can be used to make soup/sauce
 - It is a simple method that requires little attention
16. Name **two** types of seams that are stitched twice. (1 mark)
- Machine fell seam /machine doubled stitched seam
 - French seam
 - Rill and fell
17. Explain how preservation is achieved through smoking (1 mark)
- Removal of water
 - Formation of protected layer
18. Outline **two** ways of achieving shirring in disposal of fullness (1 mark)
- Use running stitches
 - Use shirring /elastic threads
 - Use longest machine stitches
19. Give **two** disadvantages of prolonged use of convenience foods (1 mark)
- Addictive in nature
 - Preservation may be hazardous to health
20. List **two** ways of saving time and energy during cooking. (1 mark)
- Dove tail
 - Correct sequencing
 - use of a pressure cooker
 - Covering food while cooking
 - Soaking dry grains
21. Describe how to take hip measurements (1 mark)
- Measure around the fullest part of hip with two fingers in between tape measure and Body.**
22. Point out **two** non-decorative patches in repair of clothes and household article (1 mark)
- Calico patch

-Print patch

23. Define home science as a competence-based subject. (1 mark)
Study of household management, which imparts knowledge, skills and attitude to an individual for the improvement on the quality of life.
24. Mary is under taking her teaching practice in a far-off county. State two most suitable methods of acquiring shelter before she resumes her studies. (1 mark)
-Renting
-Living in the employer's house
25. Outline **two** possible causes of decreased demand of free dresses by expectant mothers. (1 mark)
-Increased use of elastofibre which can stretch accordingly.
-Free dresses are viewed as old fashioned
-Due to the upcoming of alternative attire e.g. mothers' trousers.
-Due to economic reasons i.e the need to use the garment after pregnancy
26. What is rinsing as used in laundry work (1 mark)
It is the removal of dirt and soap from washed articles using clean warm water
27. State **two** social reasons for wearing shoes (1 mark)
-Identity
-Uniformity
-Enhance appearance
28. Point out **two** uses of temporary stitches in clothing construction (1 mark)
-Transfer pattern marking onto materials
-Hold seams together before permanent stitch
-Guide machine stitches
-Holds parts together e.g. basting on pleats, collars, pockets
29. Name **two** special treatment done before final rinsing (1 mark)
-Stain removal
-Disinfecting by boiling, chemical disinfectants
30. State **two** disadvantages of using powdered formulae to feed the baby (1 mark)
-Chances of contamination in the mixing of bottles if not sterile
-They are very expensive
31. Give **two** factors that determine the length of a skirt (1 mark)

-Fashion

-Moral values

-Occasion

-Personal Preference-Height of the wearer

32. Give **two** sources of natural food poisoning (1 mark)

-Grains stored in damp condition producing aflatoxin

-Poisonous parts of food (cassava)

33. List **two** qualities of a good girls' teddy bear (1 mark)

-Should be attractive in colour

-Should be easy to clean

-Should be well designed

-Should be of appropriate size depending on the age of the child

-should be light in weight

34. State **two** methods of attaching collars (1 mark)

-Use of crossway strip or binding.

-Attaching by sandwiching it between the facings/revers/

-Self-neatening method

35. Knitting of family clothing has gradually gone down. Suggest the possible reasons for this (1 mark)

-Time factors, knitting is time consuming

-Technology-knitting machines are available in the market

-Availability of cheap alternatives/second hand sweaters.

-Change in life style, women have gone professional

36. Differentiate between partial weaning and natural weaning (1 mark)

Partial weaning is when the baby is not ready to stop breastfeeding entirely but the mother allows the baby to breastfeeding once a day natural weaning is allowing the baby to outgrow breastfeeding entirely on their own.

37 Outline **two** uses of interfacing (1 mark)

-Increasing crease resistance

-Obtaining a good knife edge

-Prevent stretching or sagging

-Stiffening to add firmness

-To give body or shape

-To add warmth

38. Identify the nutritional disorder known as the ‘living skeleton’. Give a reason why its referred to as so. (1 mark)

Marasmus-The victim becomes extremely wasted due to lack of enough of all food

Nutrients.

39. Give **two** reasons why your home science teacher discourages soaking of wooden handled knives. (1 mark)

-Wood will be discoloured

-Wood will warp

-Hinges at the joints may loosen

-Can cause cut

-Some knives rust

-Handles may rot.

40. Name **two** components of a two-course meal. (1 mark)

-Appetizer/dessert

-Main meal

SECTION B: (20 MARKS)

Compulsory- Answer question 41 in the spaces provided

41. Today is your family cleaning day;
- a) Treat the temporary hard water with solid particles and store it in readiness for cleaning (3 marks)
- b) Use the treated water to;
- (i) Thorough clean your elastofibre inner wear (5 marks)

- (ii) Thorough clean the laminated in-built table in your room (6 marks)
- (iii) Weekly clean the stained melamine cup (6 marks)

SECTION C: (40 MARKS)

Answer any TWO questions from this section in the spaces provided at the end of this section.

- 42.a) Signs of a woman who is likely to have twins
- Belly grows faster and womb larger
 - Gains weight faster than normal
 - You can feel three or four large objects; head, buttocks
 - The doctor can hear two heartbeats other than the mothers (4marks)
- b) Negative effects of advertisement to the consumer (4 marks)
- Deceptive advertisements mislead the consumer due to the urge to sell
 - Goes against the values of the society
 - Leads to wrong prioritization-goods and service bought do not satisfy most important needs
 - Inferior quality of goods and services-products bought does not perform all the expectation of the consumer
 - Can lead to impulse buying-buying something one had not planned to buy
 - Can lead to overspending-buying beyond ones means
 - Goods are bought before comparing prices
- c) Giving a reason, mention four blood tests carried out in an antenatal clinic (4 marks)
- Rhesus factor-to check if the rhesus factor is negative or positive. If mothers rhesus factor is negative the problem is dealt with by the doctors
 - Haemoglobin level-to check if the mother is anemic or normal. If anemic ,iron and folic acid tablets and dietary advice is given
 - Rubella or measles-to check if she is immune to rubella or measles
 - Blood group-to determine blood group whether AB, O, A, B
 - HIV testing- to understand the implication of a positive or negative result on the baby.
- d) Mention four ways through which an individual may suffer from anaemia. (4 marks)
- Excess menstruation
 - Injury with excessive bleeding
 - Child birth
 - Late weaning
 - Poor balanced diet
 - Chronic malaria/hookworm infection
 - Lack of vitamin B12
 - Deformed red blood cells
- e) Describe four methods used to transfer pattern markings
- Use of tailor’s tacks-make a double stitch through the pattern mark and fabric.

Pull leaving 2 cm thread at the end and leave a loop before the next stitch.

Cut at the top to separate the loops

- Use of a tracing wheel and carbon papers-place carbon paper between the pattern piece with the waxed side of the fabric. Use a tracing wheel to trace out the mark.**
 - Using a tailoring chalk-chalk of contrasting colour is used to transfer the pattern on the fabric**
 - Thread marking-work out a series of loop stitches on the stitching line using double thread. Cut the loops at the top. Separate the two layers to get tufts of thread.**
- (4 marks)

43.a) You are giving a talk to ‘mothers union’ on the care of invalids. Give **four** points you would include on preventive measures (4 marks)

- Wear protective clothing**
- Personal effects be soaked in water with disinfectant**
- Personal effects should be washed separately**
- Attendants hands should be washed in water and disinfectant**

b) Explain **four** importance of preparing a shopping list before going for shopping (4 marks)

- To ensure nothing important is forgotten.**
- Items are put in orders of priority to ensure that the important items are catered for first.**
- Help one to stay within list of items intended to buy**
- Reduce chances of overspending-buying beyond ones means/Sticks within budget**
- Reduce impulse buying –buying goods one had not planned to buy**

c) Identify **four** ways in which measles can be managed in infants. (6 marks)

- Isolate the child**
- If high fever use a damp cloth wrung out of warm water to dab to regulate temperatures**
- Bed rest**
- Give plenty of fluids to prevent dehydration**
- Clean the eyes with clean saline water**
- Keep the child away from very strong lights**
- Consult doctors to avoid complications**

d) Give **four** benefits of vitamin B2 in the human body (4 marks)

- Maintains a healthy skin**
- Helps body use carbon dioxide and proteins**
- Promotes growth**
- Maintains good appetite**
- Prevents formation of cracks and sores in skin and corners of the mouth**
- Prevent tongue from becoming sore**

e) Balance points are matched with other similar ones. Point out **four** areas where they are likely to be put on a garment (4 marks)

- Where two seams meet**

- Where gathers or easing should be worked
- Where the sleeve top and shoulder seam meet

44.a) Outline four factors to bear in mind when picking flowers to arrange (4 marks)

- Pick according to arrangement
- Pick in the morning or evening –coolest time of the day/fresh
- Pick and put in cold water awaiting arrangements
- Pick enough greens/foilage to cool down colours.

b) Explain the following terms as used in consumer education; (4 marks)

(i) Fixed expenditure-**expenses which are a must and unchangeable (bills, school, fees, loans)**

(ii) Consumer exploitation –**a consumer buys goods and services but does not achieve value for his money.**

c) State four principles used when administering first Aid to a victim of poison (4 marks)

- If poison is acidic give an alkaline drink to neutralize**
- If poison is alkaline give an acidic fruit juice**
- If poison is not corrosive, induce vomiting**
- If poison is corrosive don't induce vomiting**
- Victims to vomit bending to prevent the vomiting getting into the lungs**

d) State and explain four nutrient conservation measures taken during food preparation before cooking (4 marks)

- Do not soak vegetables and fruits in washing water because it dissolves nutrients**
- Wash fruits in cold water because hot water destroys heat sensitive vitamins**
- Wash the vegetables before chopping/cutting to avoid loss of vitamins and nutrients**
Which dissolves in water
- Buy vegetables when they are fresh**
- Shred/cut/chop before cooking because exposing for long periods causes oxidation of vitamins**
- Avoid buying large quantities of vegetables and fruits that requires storage as it causes nutrients loss**
- Whenever possible take fruits in their raw form because there are more nutritious.**

e) Use the pattern markings below to describe the working of an invested pleat (5 marks)
Include a clearly labelled diagram.

1 2 3 4 5 6 7

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