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# HOME SCIENCE PAPER 1

## ANSWERS

## KCSE 2011

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## 18.1 Home Science Paper 1 (441/1)

### SECTION A

1. 

(i)	Tocopherol	-	Vitamin E
(ii)	Retinol	-	Vitamin A
(iii)	Cholecalciferol	-	Vitamin D
(iv)	Phylloquinone	-	Vitamin K
2. Qualities of containers used to freeze foods: Should be:  
  - waterproof/plastic/polythene;
  - strong/durable/long-lasting;
  - easy to handle;
  - easy to clean/washable;
  - harmless/safe to use/not rusting/not poisonous/non-toxic;
  - have a cover/lid
  - should be impermeable/should not transmit flavour/impart flavour

4 x  $\frac{1}{2}$  = 2 marks
3. Nutritional disorders associated with lack of calcium in the body are:  
  - osteomalacia /soft bones;
  - rickets/bow legs/knock knees/weak bones;
  - osteoporosis/porous/brittle bone;
  - weak teeth

Any (4 x  $\frac{1}{2}$ ) = 2 marks
4. Reasons why charcoal must be red hot before roasting meat:  
  - to seal in the juices/prevent from drying/harden;
  - to ensure food is free from smoke /getting black;
  - to cook well;
  - to save time/cook faster.

(2 x  $\frac{1}{2}$ ) = 1 mark
5. Arranging the food items into a three course meal  
Course I: Tomato soup / bread rolls  
Course II: Stewed fish  
Ugali  
Saute kales  
Course III: Vanilla cake / custard sauce.  

2 x 1 = 2 marks

NB:  
Award  $\frac{1}{2}$  x 2 for each course.
6. Ways of preventing dandruff:  
  - do not share hair combs / brushes/hair equipment;
  - keep hair combs, brushes and towels/hair equipment clean;
  - wash hair/keep hair clean;
  - oil the scalp regularly;
  - use medicated shampoos;
  - disinfect hair equipment.

Any 2 x 1 = 2 marks

7. Physical body exercises should be encouraged because they:
- enhance blood circulation;
  - assist in burning down excess fat/prevent obesity;
  - enhance the removal of sweat / waste;
  - improve appetite;
  - strengthen the body/keep body fit/keep body active/flexible;
  - stimulate the brain/relaxes the mind;
  - simulate digestion;
  - enhances good grooming/appearance.

Any 3 x 1 = 3 marks

8. Soft furnishing used in the bedroom are:

- curtains;
- duvets / comforters/blankets ;
- pelmets / valances;
- rugs / mats;
- carpets;
- lampshades;
- cushions/toys/puffed;
- pillows;
- bedspreads/bed covers;
- sheets
- wall hangings,/wall mats
- mattress covers;
- wall paper;
- pillow cases;
- table cover/chair cover;
- cushion cover.

Any 6 x  $\frac{1}{2}$  = 3 marks

9. Points to bear in mind when choosing a hurricane oil lamp

- choose a popular brand whose spare parts are readily available;
- ensure the glass, the chimney and handle fit in properly/parts fit in properly;
- choose a size that will give adequate amount of lighting;
- ensure the lamp is made of durable material;
- ensure good workmanship of the entire lamp;
- ensure the lamp is rust free;
- ensure the lamp is working/the wick can move up and down.

Any 3 x 1 = 3 marks

10. Precautions to take after a snake bite on a limb

- do not move the limb;
- tie firmly around the limb just above the bite/compress;
- suck out as much blood as possible/cut and bleed off;
- wipe the bitten part/wash;
- apply black stone/potassium permanganate;
- seek medical attention.

Any 2 x 1 = 2 marks

11. Competitive advertising is:
- the type of advertising used to promote/market/highlight/against (□) the sale of different (□) brands of similar/same goods (□) and services where advertisers try to out do (□) each other by using gimmicks that sometimes create a negative/out do impression on the products of the competitor.
- well described 2 marks
12. Methods of sterilizing bath towels are:
- boiling;
  - steaming;
  - use of disinfectants;
  - fumigation;
  - dry under the sun;
  - press with a hot iron.
- Any 2 x  $\frac{1}{2}$  = 1 marks
13. Uses of fabric conditioners, they:
- make fabric soft to touch;
  - prevent build up of static electricity prevent cloth from clinging to the body;
  - make ironing easier/reduces creasing;
  - introduce a pleasant smell/good/nice/fragrance.
- Any 2 x 1 = 2 marks
14. Functions of the following parts of a sewing machine:
- spool pin : to hold the reel of thread while sewing and winding the bobbin.
  - feed dog : to move fabric while sewing.
  - tension disc : to control the tightness or looseness of the thread during stitching/regulate/tension.
- 3 x 1 = 3 marks
15. Function of the Fishbone stitch is to hold two pieces of fabric together before darning.
- 1 mark
16. A well-made facing should:
- be visible on one side of the garment only;
  - be flat on the right and wrong sides;
  - be well knife edged;
  - have straight stitchery.
- Any 3 x 1 = 3 marks
17. Garments made from elastomeric fabric include:
- corsets;
  - bikers;
  - brassiers;
  - boob tops;
  - pants;
  - stocking / hosiery
  - camisoles;
  - petticoats;
  - boxers;
  - body suits;
  - briefs;
  - vests;
  - slips.
- Any 4 x  $\frac{1}{2}$  = 2 marks

18. Functions of pockets in a garment:
- to hold items/keep/put/store;
  - decorative/beauty/attractive;
  - as a style feature/design.

Any 2 x ½ = 1 mark

19. Reasons why easing is commonly worked on a crown of a sleeve; it:
- controls fullness;
  - gives a good fit.

Any 2 x 1 = 2 marks

### SECTION B

20. (a) Procedure to follow when laundering a silk blouse / shirts:
- Collect all the equipment and laundry materials needed (½).
  - Shake to remove loose dust (½) if any
  - Wash by kneading and squeezing (½) in warm (½) water using a mild (½) detergent soapy.
  - Rinse (½) several times/thoroughly in warm (½) water with the final rinse (½) in cold (½) water in which methylated spirit / vinegar (½) has been added.
  - Squeeze/roll (½) the blouse / shirt. Dry/roll with a clean (½) dry (½) towel (½) or
  - Dry (½) under a shade (½) on a clothes line (½) secured with pegs / hanger (½).
  - Iron (½) using a moderately hot/warm (½) iron on the wrong side (½).
  - Air (½) to dry completely.
  - Fold/hang (½)/store/keep (½).
  - Clean equipment (½) used and store (½) appropriately.
- (12 marks)
- (b) Steps to follow in the thorough cleaning of the dressing mirrors:
- Collect all the equipment and materials required (½).
  - Remove dust (½) using a dry (½) cloth wipe /rub (½) the mirror using a cloth wrung (½) out of warm (½) soapy (½) water.
  - Rinse (½) using a cloth (½) wrung out of clean (½) warm (½) water.
  - Dry (½) using a clean dry (½) cloth/newspaper/sponge (½).
  - Buff (½) mirror using a soft (½) clean dry (½) non-fluffy/ lintless cloth / newspaper (½).
  - Clean equipment used and store (½) appropriately (½).

(8 marks)

### SECTION C

21. (a) Points to consider when buying a sewing machines.
- Consider cost in relation to the functions to be done and the best that can be afforded.
  - Buy one with a guarantee/warranty or after sales service.
  - Ensure all accessories/attachment are provided for efficiency in use.
  - Buy one that is not too complicated for the user for comfort/easy use/efficiency.
  - Buy from a reliable dealer who will be able to service/supply spare parts/guarantee.
  - Check whether it is for commercial or domestic use, if commercial buy a heavy duty one/buy according to use for efficiency/serve its purpose.
  - Ensure that there is a manual for use to guide on proper use and care.
  - Choose one that is versatile to give a variety of stitches and functions.
  - Check that it is in a working condition to avoid buying a faulty machine.
  - Buy the right size for the space available.

- Buy that which can be afforded for satisfaction/not to strain your income.
  - Buy a machine with readily available spare parts for easy replace.
- Any 4 x 2 = 8 marks
- (b) Care of a white Nylon shirt.
- Avoid exposure to direct sunlight as it will yellow.
  - Avoid rubbing as it piles.
  - Avoid high temperature as it destroys the fibre/melts/burns/scorch.
  - Do not bleach as it will turn yellow.
  - Wash separately from coloured garments to avoid discolouration.
- Any 3 x 2 = 6 marks
- (c) Differentiating between the following:
- (i) Wear and tear;
    - Wear is when a garment develops signs of weakness and thinning(1) due to friction while a tear is a hole or straight cut (1) on a garment caused by a strong pull / sharp object.
  - (ii) Casing and hem;
    - A casing has two rows of stitching while a hem has one.
    - A casing has an opening for inserting elastics/cords while a hem is a way of finishing a row edge.
  - (iii) Regenerated and synthetic fibres.
    - Regenerated fibres are made from natural materials (½) which are chemically (½) treated while synthetic fibres are made from petroleum(1) products and natural gases.
    - Regenerated fibres are natural materials (½) treated with chemicals (½) while synthetics are purely chemicals (1).
- 2 x 3 = 6 marks
22. (a) Life styles associated with the following nutritional disorders.
- (i) Gout - High intake of alcohol and meat.
  - (ii) Anorexia Nervosa - refusal to eat in order to remain slender.
  - (iii) Hypertension - consumption of too much salt/stress.
  - (iv) Obesity - high consumption of junk / processed foods/high intake of carbohydrates/fatty foods/sedentary lifestyle/lack of exercise.
- 4 x 1 = 4 marks
- (b) Advantages of using convenience foods.
- They save on time, labour and fuel as little cooking is required.
  - They are handy because they can provide a quick snack/meal in case of unexpected guests/travel/picnic/being busy/less time.
  - They are economical since there is no wastage in preparation such as trimming, peeling or shelling.
  - They are attractive since colour is added during processing.
  - Seasonal foods can be made available as they can be canned / dried / bottled.
  - Nutritional value is enhanced as some foods are fortified.
  - They are easily/readily available since they are found in many outlets.
  - They give a chance to try new recipes as instructions are laid/they are partially prepared.
  - They are less bulky therefore easy to store and shopping.



- (c) Factors to consider when setting a table.
- The number of people taking the meal as this determine the number of covers to be laid.
  - The meal to be served as this ensures that all the tableware is available.
  - Number of courses/dishes as this enables one to set the cover for the courses.
  - Tableware as this determines their placement.
  - Type of meal service as each type has its own way of laying the table.
  - The type of dinners determines the way of table setting eg. ages, special needs.
  - A centre piece should be available for beauty/enhance appetite.
  - Provide adequate space to avoid overcrowding for comfort.
  - Ensure the room is clean for hygiene.
  - The table cloth should be well laundered for neatness.
  - Table appointments should be clean for hygiene/enhance appetite.

Any 4 x 2 = 8 marks

23. (a) (i) The two sources of light are:
- Natural and artificial.
  - Any source of light eg. sun, moon, candle.

(1 mark),

- (ii) Reasons for providing appropriate lighting in a sickroom;
- To give clear visibility for ease caring of the sick/to avoid accidents.
  - To avoid too dim a light that strains the eye of the sick.
  - To avoid glare that strains the eye of the sick.
  - To enhance interior decor making the room comfortable for the sick.
  - To ensure the light is well distributed to avoid fatigue/pests/germs.
  - To cheer the sick to promote quick recovery.
  - To provide warmth to make the sick comfortable.

Any 3 x 2 = 6 marks

- (b) Points to observe in the care of lighting fixtures.
- Keep all lighting fixtures in good state of repair for efficiency and safety.
  - Dust lighting fixtures regularly to get rid of loose dirt.
  - Occasionally wipe with a damp cloth to remove marks.
  - Ensure that movable lighting fixtures such as table or floor lamps can stand stable to avoid accidents/keep in a safe place to avoid breakage/destruction.
  - Replace blown out bulbs promptly to ensure adequately light in each room.

Any 4 x 2 = 8 marks

- (c) Possible causes of pre-mature birth:
- STI's/gonorrhoea, syphilis;
  - anaemia;
  - smoking of tobacco;
  - low weight in pregnancy / poor weight gain in pregnancy;
  - alcohol intake;
  - poor nutritional status/malnutrition;
  - high levels of stress / shock/trauma/accidents;
  - cervical incompetence;
  - serious infections such as pneumonia, malaria;
  - use of hard drugs
  - use of un-prescribed medicine
  - performing difficult tasks;
  - hypertension/high blood pressure.

Any 5 x 1 = 5 mark