

18.0 HOME SCIENCE (441)



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:

4 x 1/2 = 2 marks

- 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

3. Nutritional disorders associated with lack of calcium in the body are:

Any (4 x 1/2) = 2 marks

- osteomalacia /soft bones;
- rickets/bow legs/knock knees/weak bones;
- osteoporosis/porous/brittle bone;
- weak teeth

4. Reasons why charcoal must be red hot before roasting meat:

(2 x 1/2) = 1 mark

- 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.

5. Arranging the food items into a three course meal

2 x 1 = 2 marks

Course I: Tomato soup / bread rolls

Course II: Stewed fish

Ugali

Saute kales

Course III: Vanilla cake / custard sauce.

3 x 1 = 3 marks

NB:

Award 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 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 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 you 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.

- (c) Differentiating between the following: Any 3 x 2 = 6 marks
- (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).

22. (a) Life styles associated with the following nutritional disorders. 2 x 3 = 6 marks
- (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.

- (b) Advantages of using convenience foods. 4 x 1 = 4 marks
- They save on time, labour and fuel as little cooking is required.
 - They are handy because they can provide a quick snack/meal incase 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

18.2 Home Science Paper 2 (441/2)

		SCORE	MAXIMUM SCORE
1.	PRESENTATION		
(a)	Work well pressed (1) and folded (½)	1½	6½
(b)	Label (½) firmly fixed (1) without concealing details (½) and on a single fabric (½)	2½	
(c)	Pins/Needles (½) unnecessary tacking threads (½) and loose threads (½) removed	1½	
(d)	Made up for the right half	1	
2.	CUTTING OUT		
(a)	All seven pieces cut out (7 x ½)	3	18½
(b)	Smooth cutting of yoke C.F (1) and cut on straight grain (1) to within 3 mm.	2	
(c)	Smooth cutting of dress C.F (2) And cut on straight grain (2) to within 3 mm.	4	
(d)	Smooth cutting of dress CB (2) and cut on straight grain (2) to within 3 mm	4	
(e)	Front facing smoothly cut at the C.F. (½) and cut on straight grain (½)	1	
(f)	Back facing smoothly cut at the CB (½) and cut on straight grain (½)	1	
(g)	Smooth cutting of the dress lower edge front (1) and back (1)	2	
(h)	Sleeve binding cut on true bias	1	
3.	OVERLAID SEAM [if not overlaid award Zero(0)]		
(a)	Yoke placed over dress on the R.S (½) with raw edge of overlap well tucked under (½)	1	5
(b)	Stitching line straight (1) and close to the fold (½)	1½	
(c)	Correct width of neatened seam (½) 1 cm to within 2 mm (0.8 cm - 1.2 cm) and even (½)	1	
(d)	Overlaid seam turnings facing up (½) at the sleeve end.	½	
(e)	Yoke and dress flashing at the seam.	1	
4.	OVERCASTING STITCHES [If not overcasting stitches award zero (0)(a-d)]		
(a)	Evenness of stitches	1	4
(b)	Correct tension of the stitches	1	
(c)	Uniform length of stitches	1	
(d)	Density of stitchery	1	

		SCORE	MAXIMUM SCORE
5.	SHOULDER SEAM [If not open seam award zero (0)]		
(a)	Seam joined with straight stitchery	1	3
(b)	Seam pressed open (1) and flat at armhole (½) and neckline (½)	2	
6.	SIDE SEAM [If not open seam award zero (0)]		
(a)	Seam joined with straight stitchery	1	9
(b)	Well neatened raw edges (1 x 2)	2	
(c)	Evenness of seam allowance	2	
(d)	Correct size of seam allowance (2 cm) to within 2 mm (1.8 - 2.2 cm)	2	
(e)	Seam pressed open (1) and flat at armhole (½) R.S and (½) W.S	2	
7.	INVERTED PLEAT [If not inverted award zero (0) for a]		
(a)	Both folds facing away from each other on RS (1) and meeting on W.S (1) to within 2 mm	2	7
(b)	Correct width of inverted pleat 2 cm on R. S (1x2) to within 2 mm (1.8 cm - 2.2 cm) at sleeve hem	3	
(c)	Pleat firmly fixed at sleeve hem (1) and well pressed (1)	1	
(d)	Pleat flat at sleeve hem.	1	
8.	SLEEVE		
(a)	Good hang	1	13
(b)	Gathers well distributed (1) at the crown (1)	2	
(c)	Under arm seam joined with straight stitchery	1	
(d)	Armhole seam made with straight stitchery	2	
(e)	Notches matched at the armhole seam (½ x 2)	1	
(f)	Binding joined before attaching	1	
(g)	Binding attached using straight stitchery (½)	½	
(h)	Binding seam and under arm seam flashing to within 2 mm	½	
(i)	Correct width of Binding (1) cm to within 2 mm (0.8 - 1.2 cm) and even in width (1)	2	
(j)	Underarm seam meeting side seam to within 2 mm	1	
(k)	Flatness of binding	1	
9.	SLIP HEMMING [If not slip hemming award zero (0)]		
(a)	Raw edge well tucked under	1	3½
(b)	Stitches worked by picking from the stitching line	½	
(c)	Correct tension	1	
(d)	Slip hemming with pleat concealed into binding	½	
(e)	Neatness of stitchery	½	