

P640/2
FOODS AND NUTRITION
(With science in the home)
THEORY
PAPER 2
July/August 2017

2¹/₂ hours



WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Advanced Certificate of Education

FOODS AND NUTRITION
(With science in the home)

Paper 2

2 hours 30 minutes

INSTRUCTIONS TO CANDIDATES:

- *You may work out your answers using any unit but imperial units must not be mixed with metric ones.*
- *This paper consist of six questions.*
- *Answer any four questions.*
- *Any additional question(s) answered will not be marked.*

1. (a) (i) Explain the working principles and mechanism of operation of a compressor refrigerator. (06 marks)
- (ii) How would you maintain the efficiency and operation of a refrigerator. (07 marks)
- (b) What are the effects of the following in a home?
 - (i) Condensation. (03 marks)
 - (ii) Excess humidity. (03 marks)
- (d) Compare and contrast the use of any **two** thermometric liquids. (06 marks)
2. (a) Describe scientific principles and mechanisms underlying the operation of the following equipment
 - (i) Hand mincer. (05 marks)
 - (ii) Spin dryer (05 marks)
- (b) Explain any **five** ways in which you would care for motor driven equipment. (05 marks)
- (c) (i) Explain any **four** ways in which water is contaminated at community level. (04 marks)
- (ii) Describe an experiment you would carryout to measure total hardness of water. (06 marks)
3. (a) (i) Describe the construction of a microwave oven. (07 marks)
- (ii) Explain how the following properties gain application in use of micro wave ovens;
 - (i) Reflection
 - (ii) Transmission
 - (iii) Absorption
 (06 marks)
- (b) Discuss how the following forms of lighting can be achieved and applied in a home;
 - (i) Direct lighting (04 marks)
 - (ii) Generalized lighting (04 marks)
- (c) State any **four** ways in which you can control light entering a building. (04 marks)
4. (a) (i) Discuss the energy changes that lead to production of hydro electricity. (05 marks)
- (ii) Explain any **five** dangers of relying on liquid fuels in a home. (05 marks)

- (b) A family uses the following appliances in a month.

Quantity	Appliance	Power consumption	Time in hours (for the whole month)
1	Electric Iron	750Watts	8
2	Electric cooker	2.5Kw	28
10	Bulb	125Watts	56
1	Sandwich toaster	750Watts	4

- (i) How many units of electricity will this family need for that month.
(05 marks)

- (ii) If the cost of electric energy with other additional user charges are rated as follows.

0 to 15 units at 150/=

16 to 100 units at 610/=

101 units and above at 100/=

VAT at 17%

Standard fee at 2000/=

Calculate the amount of money which this family will spend on electricity bills.
(05 marks)

- (iii) Explain the operation of a sandwich toaster.
(05 marks)

5. (a) (i) How do machine simplify work?
(03 marks)

- (ii) A pulley system consists of two wheels, one movable and the other fixed. The pulley is used to raise a load of 120N by applying a force of 80N down wards on the string.
Find the efficiency of the pulley.
(03 marks)

- (iii) Explain any **three** ways in which you can improve the efficiency of machines used in the home.
(03 marks)

- (b) (i) Briefly explain any **four** qualities of a good laundry detergent.
(04 marks)

- (ii) Give the differences between the manufacture of soaps and soapless detergents.
(03 marks)

- (c) (i) Explain the action of any named detergent in the removal of grease from a dirty fabric.
(06 marks)

- (ii) Why should water be aided during laundry.
(03 marks)

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(06 marks)

- (ii) Why should water be aided during laundry.
(03 marks)

6. (a) (i) With an illustration, explain the working principle of a gas burner. (05 marks)
- (ii) Discuss any **five** ways by which you would use an electric cooker economically. (05 marks)
- (b) How would you control temperature on a charcoal stove? (05 marks)
- (c) How has the utilisation of liquid fuel led to global warming? (05 marks)
- (d) Discuss any **five** factors that make iron a suitable metal for making household cooking equipments. (05 marks)

END

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PAPER 2
July/August 2018

2½ hours



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Paper 2

2 hours 30 minutes

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- *This paper consist of six questions.*
- *Answer any four questions.*
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1.
 - a) Noise is a common pollutant in cities. Suggest how a home designer can reduce noise inside a home. (4marks)
 - b) What factors contribute to ones' comfort in a home and how can these factors be achieved. (10marks)
 - c) Account for the fact that a distant lightening flash is seen before thunder is heard during a thunderstorm. (3marks)
 - d)
 - i) Explain how glare can be prevented in a home. (4marks)
 - ii) Outline the ways of saving on lighting in a home. (4marks)

2.
 - a) What do you understand by the following terms relating to water.
 - i) scaling. (1½ marks)
 - ii) dental fluorosis (1½ marks)
 - b) Water bodies face a great risk of pollution.
 - i) Name the possible water pollutants. (1½ marks)
 - ii) Describe how water is treated at a plant before its rendered available for domestic use. (10 marks)
 - c) Describe the procedure involved in the soap manufacture by the boiling method. (6 marks)
 - d) State the uses of soaps and detergents in a home. (4 ½marks)

3.
 - a) Explain the construction and working principle of the following electrical appliances:
 - i) Hand mixer (6½ marks)
 - ii) Compressor type refrigerator (7½ marks)
 - b) A 2KW electric kettle is connected to a standard fuse plug for operation on 240V main supply. Calculate the correct size of the fuse for the plug. (2 marks)
 - c) A room is heated by a thermostatically controlled heater rated 2KW which is estimated to be switched on 40% of an eight hour period. The lighting is provided by four 150W bulbs which are in continuous use.
 - (i) What is the fuse rating required if the whole circuit is run on a 240V main supply? (2 marks)
 - (ii) Calculate the total cost of the heating and lighting the room during the eight hour period assuming the cost of electrical energy to be 550 shillings per unit. (2½ marks)
 - d) How would you ensure safety when using an electrical appliance?(5 marks)

- a) Discuss colour under the following;
 - i) warm olours (2 ½ marks)
 - ii) cool colours (2 ½ marks)
 - iii) triad harmonies (2 marks)

- b) How would you disguise the effects of a large room with a low ceiling. (4 marks)
- c) Describe the various methods and devices used to achieve mechanical ventilation. (6 marks)
- d) i) Outline the advantages of solar energy over electrical energy. (3 marks)
- ii) How can you save fuel when using a charcoal stove? (5 marks)
5. a) i) What is total hardness of water? (1 mark)
- ii) Explain the nature of scum. (3 marks)
- b) Giving examples, state the different types of soap additives and their uses in laundry. (5 marks)
- c) What are the dangers of using the following;
- i) a charcoal stove inside a poorly ventilated room. (4 marks)
- ii) aerosol sprays. (3 marks)
- d) i) What is the purpose of a 13amp fuse in domestic appliances. (3 marks)
- ii) Describe how you replace a burnt 3 pin plug on a cable of an appliance. (6 marks)
6. a) Describe an experiment to show that water is a poor conductor of heat. (6 marks)
- b) Explain how modern buildings are insulated from heat loss during cold conditions. (5 marks)
- c) Explain the reasons for the following;
- i) cooking utensils should be coated or laminated on the outside. (3 marks)
- ii) a cement floor feels cold to the bare feet. (1 marks)
- iii) tea pots and coffee pots keep their contents hot for a long time. (3 marks)
- d) The heating element in a percolator is immersed in 1.5kg of water at 20°C. The element is then connected to 240V supply and a current of 10amps flows for 5minutes. If the efficiency of the heating element is 80%. Find;
- i) the resistance of the element. (2 marks)
- ii) The final temperature of the water. (Specific heat capacity of water = 4200 J kg⁻¹ K⁻¹. (5 marks)

END

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Paper 2

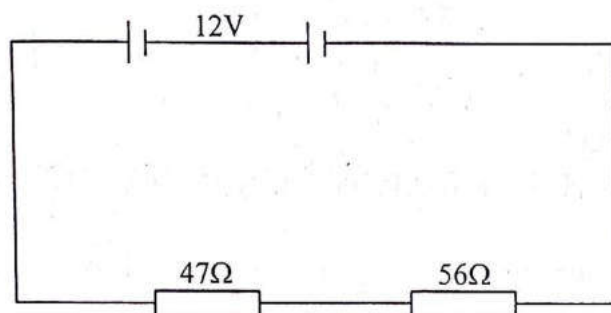
2 hours 30 minutes

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SECTION A

1. (a) Describe how the siphon principle is applied in the operation of the automatic flushing tank of a urinal system. (5 marks)
- (b) Describe the principles of operation of a cistern tank in a domestic water closet toilet. Illustrate with a diagram (16 marks)
- (c) The figure below shows a simple circuit consisting of a source Emf (12v) and two resistors (47Ω and 56Ω):



Calculate;

- (i) The current through the circuit. (3 marks)
 - (i) The voltage across the two resistors. (3 marks)
 - (ii) Power dissipated by each resistor (3 marks)
 - (d) How does a fuse provide protection to an appliance? (2 marks)
2. (a) Noise is a serious hazard to health. Suggest methods for reducing noise and for sound absorption in dwellings. (5 marks)
 - (b) Explain the factors that contribute to your home comfort and how these factors can be achieved? (5marks)
 - (c) (i) State the laws of reflection of light. (2marks)
 - (ii) Suggest reasons why convex mirror are used as driving mirrors. (2marks)
 - (d) How is evaporation important in a home? (6 marks)
 - (e) Describe how a tap is constructed to suit its purpose. (5 marks)
3. (a) (i) What are the applications of magnetic force. (4marks)
 - (ii) Describe with a clearly labelled diagram the operation of an electric bell. (7marks)
 - (b) (i) Explain the features of modern electric cookers? (5 marks)
 - (ii) How would you prevent drought in a house? (5 marks)
 - (c) How do cooker hoods bring about proper ventilation in the kitchen? (4 marks)

4. (a) Compare and contrast a beam balance and a spring balance. (5 marks)
- (b) Explain the working of (5 marks)
- (i) Cess pit
- (ii) Septic tank in the disposal of waste. (5 marks)
- (c) Explain the different ways of smoothening electric fires in Uganda. (6 marks)
- (d) When cooking at high altitudes the food takes longer to cook. Explain. (4 marks)
5. (a) What are the dangers of each of the following; (3 marks)
- (i) Charcoal stove (3 marks)
- (ii) aerosol sprays. (10 marks)
- (b) Explain the forms of energy used in a home. (4 marks)
- (c) Why does a person float more easily in salt water than in fresh water? (5 marks)
- (d) Describe a simple experiment to demonstrate the effect of heat on solids? (5 marks)
6. (a) State the characteristics of colour. (3 marks)
- (b) Explain the various principles of operation of the different dish washers. (7 marks)
- (c) (i) What do you understand by the term efficiency of a machine? (1 mark)
- (ii) A system of levers with a velocity ratio of 25 overcomes a resistance of 3300N.
- When an effort of 165N is applied. Calculate; the mechanical advantage and efficiency of the system. (5 marks)
- (d) A bucket of water can be whirled in a vertical circle without the water spilling out even at the top of the circle when the basket is upside down. Explain. (4 marks)

END

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1. (a) Explain the role of the following in removing water hardness.
 - (i) Ion exchange process. (4marks)
 - (ii) Demineralising resin. (4marks)
- (b) Explain the causes of alkaline and acidic hardness in water. (4marks)
- (c) Briefly explain how sewage can be treated in the community before being disposed into the lakes. (7marks)
- (d) How are detergents able to make various fabrics clean? (6marks)
2. (a) With the help of illustrations, describe the mode of operation of the following.
 - (i) Electric steam iron. (6marks)
 - (ii) CO₂ based fire extinguisher. (6marks)
- (b) With examples, explain the guidelines to follow when using motor driven equipment. (6marks)
- (c) (i) State the principle of conservation of energy. (2marks)
- (ii) A boy of mass 25kg is lifted from the ground through a height of 20m. Calculate the minimum work done in lifting the boy. (3marks)
- If the boy was lifted for 5 minutes, calculate the power used. (2marks)
3. (a) Describe the following applications of convection in the home.
 - (i) Domestic hot water supply. (6marks)
 - (ii) Domestic room ventilation. (4marks)
- (b) (i) What are the advantages of a force pump over a lift pump? (3marks)
- (ii) Outline the factors that determine the maximum height to which the water is raised. (3marks)
- (iii) Calculate the maximum height through which a common pump could raise water when the atmospheric pressure is 760 mm Hg and density of mercury 13.6g/cm³. (3marks)
- (c) Briefly explain how knowledge about the following is useful in the home.
 - (i) pH (3marks)
 - (ii) Oxidation. (3marks)

4. (a) A catering institute uses the following appliance;

Appliance	Quantity	Rating	Time in hours for a month
Electric cookers	4	8kw	150
Gas cookers	2	100ft ³ /hr	80
Deep freezers	2	250w	65
Electric iron box	4	750w	60
Deep fat fryers.	2	80ft ³ /hr	10

- (i) Why would you recommend the institute to have some gas cookers. (5marks)
- (ii) What pre cautions should be taken when using the gas cookers. (5marks)

- (b) (i) If each unit of electricity costs 510/=-, VAT of 17% and service fee of 2000/=- are charged.
Calculate the monthly bill of running the electric appliances. (6marks)
- (ii) Given that the calorific value of gas is 500 BTU/ft³ and a thermo of gas costs 2500/=-. Calculate the cost of running the gas appliances. (4marks)
- (c) How are the principles under lying the operation of a gas cooker different from that of an electric cooker. (5marks)
5. (a) Briefly explain the following observations.
- (i) Evaporation increases with increase in surface area. (2marks)
 - (ii) Cooking food takes longer in mountainous areas. (2marks)
 - (iii) Quick freezing is better than slow freezing. (2marks)
 - (iv) Soiling is noticeable on cuffs, collars and hems of garments than in other parts. (2marks)
 - (v) When walking on snow, it sticks and cakes on the sole of the shoe. (2marks)
- (b) (i) Briefly explain how light fittings are used to produce direct and indirect lighting. (6marks)
- (ii) Briefly explain the operation of a fluorescent tube. (4marks)
- (c) Explain the principles underlying the operation of a bread toaster. (5marks)
6. (a) Using illustrations explain the mode of operation of the following.
- (i) Dish washers (6marks)
 - (ii) Agitation type of washing machine. (4marks)
- (b) What is the general care you would give to washing machines in the home? (5marks)
- (c) Why would you prefer automatic to manual equipments in the home. (4marks)
- (d) How are levers classified and how can you maintain their efficiency. (6marks)

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Turn Over

1. (a) Explain the construction and working mechanism of a coffee filter machine. (8marks)
 - (b) (i) Explain the relationship between M.A, V.R and efficiency of a machine. (3marks)
 - (ii) A machine of V.R 5 is used to raise a load whose weight is 200N. What is the efficiency of the machine? (4marks)
 - (c) (i) Differentiate between centripetal and centrifugal forces and outline the application of these forces in the home. (5marks)
 - (d) (i) Explain the mechanism of operation of a vacuum cleaner. (5marks)
2. (a) Explain the importance of each of the following water treatment processes and explain how they are achieved.
 - (i) Clarification
 - (ii) Chlorination
 - (iii) Screening (3marks)
- (b) (i) How is water from a reservoir able to reach the user in a storeyed building. (6marks)
 - (ii) How is a lift pump different from a force pump as far as operation and efficiency are concerned? (4marks)
- (c) How are detergents able to make a dirty fabric clean? (6marks)
3. (a) Write short notes on the following; (8marks)
 - (i) Diffusion occurs more quickly in gases than liquids.
 - (ii) Loose fitting string and cellular garments are warmer than tight fitting clothes.
 - (iii) The effect of adding unrefined salt to beans being cooked by many people in village setups.
 - (iv) Many synthetic fibres tend to stick to the body.
- (b) Discuss the various steps and scientific principles involved in the following;
 - (i) Clearing a blocked sink using a rubber plunger. (5marks)
 - (ii) Production of minced meat using a hand mincer. (5marks)
 - (iii) Sucking soda from a bottle. (3marks)
- (c) How can materials made from iron be improved to increase their durability? (4marks)

4. (a) (i) What are the effects of heat on various materials in the home? (5marks)
(ii) Compare and contrast the use of mercury and alcohol as thermometric liquids. (6marks)
- (b) With examples, explain how expansion in gases is useful in food preparation. (3marks)
- (c) (i) A tank holding 60 litre of water is heated by a 3KW electric immersion heater.
If the S.H.C of water is 4200J/kg/k, estimate the time for the temperature to rise from 20°C to 90°C (4marks)
- (ii) Why does jam in a hot jam roly polly seem hotter than the pastry? (2marks)
- (iii) Explain the equivalent heat required for vaporization. (2marks)
5. (a) (i) How is decorative lighting achieved? (4marks)
- (ii) Explain how you would ensure good lighting in the;
(i) Reading room. (2marks)
(ii) Bed room. (3marks)
(iii) Kitchen. (2marks)
- (b) A girl has a birthday party, she is to set a large number of 240V, 80W coloured bulbs and a music system of 240V, 1500W in general.
- (i) How many bulbs can she connect to a 240V supply through a 5A fuse? (3marks)
- (ii) What would be the total power in the circuit? (2marks)
- (iii) Draw the diagram of the circuit she would use for the bulbs. (3marks)
- (iv) If electrical energy costs 540/= per unit, what will be the cost of running the party for 5hours and 30 minutes. (6marks)
6. (a) (i) House hold energy saving equipment can be effective when used correctly. With examples, explain this statement. (5marks)
- (ii) Explain how you can minimize fatigue when doing house hold work. (5marks)
- (b) Explain the construction and operation of a charcoal stove. (7marks)
- (c) Explain the meaning of the term Cross Ventilation. (3marks)
- (d) Discuss the importance of the colour wheel in selecting colour schemes and general house hold furnishing. (5marks)

-END-

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- *Use diagrams for illustration where necessary.*
- *Answer **four (4)** questions.*

1. a) Discuss the scientific principles underlying the operation of;
 - i) Foam fire extinguisher, (05 marks)
 - ii) Primus stove. (05 marks)
- b) Explain how water pressure can be used to produce hot water . (05 marks)
- c) i) Differentiate between a pressure cooker and an electric cooker basing on their principles of operation. (05 marks)
- ii) Explain the general guidelines that should be followed when using a pressure cooker. (05 marks)
2. a) i) Define colour and discuss its qualities. (04 marks)
- ii) Draw a colour wheel and use it to explain;
 - A complementary colour scheme
 - A triad colour scheme. (06 marks)
- b) i) Briefly explain the principles behind ventilation. (03 marks)
- ii) Discuss the different methods of mechanical ventilation. (06 marks)
- c) Explain the role of lamp fittings in direct and indirect lighting. (06 marks)
3. a) i) Compare and contrast the construction of a gas operated and compression type of refrigerator. (06 marks)
- ii) What are the advantages of upright freezers over chest freezers? (03 marks)
- b) i) Describe the operation of a beam balance. (03 marks)
- ii) Explain the general care that should be given to weighing scales. (05 marks)
- c) With the aid of a well labeled diagram, describe the process of making perfumes and essence from flowers and herbs. (05 marks)
- d) Explain why mercury dropped on a glass surface forms small spherical balls. (03marks)

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- *Answer any four (4) questions.*

4. (a) Discuss the effects of heat energy on various materials in the home. (4 marks)
- (b) i) Using illustrations, compare and contrast the series and parallel connections in electrical wiring. (4 marks)

- (c) UMEME charges its electricity bills with additional changes as follows;

0 – 30 units 50/= @

31 – 200 units 240/= @

201 units and above 100/= @

A home uses electricity everyday as follows;

- (i) Two 60w bulbs for 2 hours each.
(ii) Two 100w bulbs for 1 hour each.
(iii) One modern 3kw electric cooker for 3 hours.

If the supply is 240V and the month is 31 days

- (i) Find the suitable rating of the lighting fuse and give reasons for that choice. (3 marks)
- (ii) Calculate the expected monthly bill if VAT is 20% and standard fee is 2500/=. (10 marks)
- (d) Give the difference between the role of a fuse and that of a circuit breaker. (3 marks)

5. (a) i) Describe the operation of the lever, siphon and ball valve in a toilet flush system. (10 marks)

- (ii) Briefly explain the planning and location of a lavatory room. (4 marks)

- (b) i) Describe the construction of the kitchen sink. (5 marks)
- ii) Outline any four methods of unblocking the kitchen sink. (2 marks)

(c) How are the following scientific principles useful in the home?

(i) Smoothening

(2 marks)

(ii) Capillarity

(2marks)

(a) i) With the help of a diagram, explain how a gas burner operates.

(5 marks)

ii) State the precautions that should be taken when using a gas stove at home.

(5 marks)

(b) Describe the operation and working principle of a vacuum cleaner.

(6 marks)

(c) i) Explain the function of the following;

(i) Fabric conditioners

(ii) Enzyme soap powders.

(2marks)

- END -

P640 / 2
Foods and Nutrition
PAPER 2
July / August 2009
2 Hours

WAKISSHA JOINT MOCK EXAMINATIONS
Uganda Advanced Certificate of Education

Foods and Nutrition
Paper 2

2 Hours

INSTRUCTIONS:

- **Answer four questions only.**

WAKISHA
FOODS AND NUTRITION
MOCK EXAMINATION 2009
P640/2
2 HOURS

Instructions: Answer four questions only.

1. a) Sketch a diagram to illustrate a simple domestic ring circuit electrical installation. (6 Marks).
b) Differentiate between:
 - i) Alternating and direct currents. (2 Marks).
 - ii) Parallel and series electric connections. (2 Marks).
 - iii) A cartridge fuse and a circuit breaker. (2 Marks).c) Describe the production of a photo-electric current (5 Marks).
d) Discuss the use of photo-electricity in the home. (8 Marks).

- 2 a) i) Define atmospheric pressure. (2 Marks).
ii) Explain the factors that affect the boiling point of a substance (3 Marks).
b) Describe the working mechanism of:
 - i) An instantaneous gas water heater. (5 Marks).
 - ii) An automatic sprinkler fire extinguisher. (5 Marks).
 - iii) A hospital autoclave. (5 Marks).
 - iv) Gas thermostat (5 Marks).

- 3 a) i) Outline the causes of the present world energy crisis. (5 Marks).
ii) Explain the precautions that a family living in Uganda should take to in order to save energy. (5 Marks).
b) i) Explain the factors that influence the rate at which wet clothes dry. (5 Marks).
ii) Discuss the principles governing the working mechanisms of washing machines. (10 Marks).

- 4 a) i) Explain how you would avoid monotony when using a monochromatic colour scheme. (5 Marks).
ii) Explain how light can be utilized during the decoration of a living/sitting room. (10 Marks).
iii) Discuss the factors that should be considered when choosing a bedroom colour scheme. (5 Marks).
b) Explain the working mechanism of a pressure lamp. (5 Marks).

- 5 a) i) Explain the importance of good kitchen ventilation. (5 Marks).
ii) Discuss the various ways of ensuring effective kitchen ventilation. (10 Marks).
- b) i) Differentiate between direct and indirect room heating systems. (5 Marks).
ii) 'Space heating and room ventilation are complementary processes.' Discuss this statement and illustrate your answer with suitable diagrams. (5 Marks).
- 6 a) Explain the physical and chemical processes involved in the purification of water. (5 Marks).
- b) Discuss the use of the following:
i) Anionic and cationic detergents. (5 Marks).
ii) Florescent substances. (5 Marks).
iii) Fabric softeners. (5 Marks).
- c) State four agents that are normally added to synthetic detergents so as aid in their cleansing action. (5 Marks).

P640/3
FOODS AND NUTRITION
(WITH SCIENCE IN THE HOME)
PRACTICAL
PAPER 3
July / August 2012
3 hours



WAKISSHA JOINT MOCK EXAMINATIONS
Uganda Advanced Certificate of Education

FOODS AND NUTRITION
(with science in the home)
PRACTICAL

Paper 3

Planning Session: 2½ hours

Preparatory work: 30 Minutes.

Practical examination: 3 hours

PLANNING SESSION

INSTRUCTIONS TO CANDIDATES:

- When you have chosen your test; you are allowed 2 hours and 30 minutes in which to do the following:-

- (i) Write down the names of the dishes chosen and give practical and nutritional reasons .
- (ii) Making use of the carbonated sheet provided, make a detailed plan of work showing recipes and estimated cost of the main ingredients.
- (iii) Draw up; from the recipes a list of total quantities of ingredients required.

NOTE: CALCULATIONS SHOULD BE DONE WITHIN THE PLANNING SESSION.

Food tables, recipe books and note books may be used for planning, but should not be referred to constantly within the examination.

1. (a) Show your skills in making the dishes below;
 - (i) Croquette using vegetables as filling.
 - (ii) Mixed grill kebabs
 - (iii) Mince pie.
- (b) Prepare and serve a simple meal for a toddler who is recovering from Malaria.
- (c) Bake a fruit dish which can be served as a pudding.
- (d) Calculate the protein content of the meal for the toddler.

2. You are invited to participate in a "True African cookery Contest"
 - (a) (i) Prepare and present a variety of exciting dish that complete a two course meal.
 - (ii) Show your skills in preserving any local fruit.
 - (b) Present a stuffed pumpkin as your centre piece.
 - (c) Calculate the Vitamin C content of the meal.

3. (a) Prepare, cook and serve a dish to illustrate the following uses of eggs in cookery.
 - (i) Eggs as a raising agent
 - (ii) Eggs as an emulsifying agent.
 - (b) Prepare a meal to show the economical use of time, energy, fuel and equipment.
 - (c) Prepare, cook and serve one dish to show your skills in the use of left-over foods.
 - (d) Calculate the protein content of the dish in a(i) above and cost it.

4. (a) Prepare, cook and pack lunch for a Manson. The lunch should consist of the following.
 - (i) A dish using flaky pastry.
 - (ii) A fruit drink from local fruits.
- (b) Make the following dishes to be served as part of his dinner.
 - (i) Chicken curry
 - (ii) Posho delite.
 - (iii) Vanilla souffle'.
- (c) Calculate the calorific value of the packed meal and work out the cost of the soufflé.

5. (a) Prepare a dish for each of the following cookery processes to be supplied at the school canteen.
 - (i) Kneading
 - (ii) Whisking
 - (iii) Creaming
 - (iv) Rubbing in.
- (b) Using one of the suitable dishes above, prepare and serve English tea for your Headmistress returning from a workshop.
- (c) Demonstrate how you would preserve fresh fish without using a refrigerator.
- (d) Calculate Iron content of the dish in 5 a(i) above.

-END -