

P640/2
FOODS AND NUTRITION
(With science in the home)
THEORY
PAPER 2
July / August 2015

2½ hours



WAKISSHA JOINT MOCK EXAMINATIONS

Uganda Advanced Certificate of Education

FOODS AND NUTRITION
(With science in the home)

Paper 2

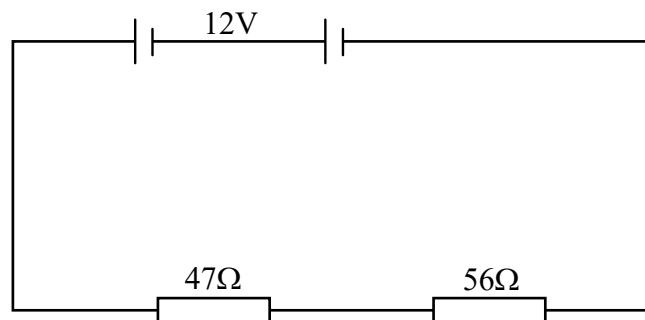
2 hours 30 minutes

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.*

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. (3marks)
 - (ii) Power dissipated by each resistor (3 marks)
 - (d) How does a fuse provide protection to an appliance? (2marks)
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? (6marks)
 - (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
- (i) Cess pit (5 marks)
- (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;
- (i) Charcoal stove (3 marks)
- (ii) aerosol sprays. (3 marks)
- (b) Explain the forms of energy used in a home. (10 marks)
- (c) Why does a person float more easily in salt water than in fresh water? (4 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