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**ICT, MATHEMATICS AND
ENTREPRENEURSHIP**

June/July 2020

Time: 3 hours



THE KENYA NATIONAL EXAMINATIONS COUNCIL

**CRAFT CERTIFICATE IN BAKING TECHNOLOGY
CRAFT CERTIFICATE IN CHILDCARE AND PROTECTION
CRAFT CERTIFICATE IN PETROLEUM GEOSCIENCE
CRAFT CERTIFICATE IN FASHION DESIGN AND GARMENT MAKING TECHNOLOGY
CRAFT CERTIFICATE IN FOOD AND BEVERAGE PRODUCTION SALE AND SERVICE
CRAFT CERTIFICATE IN CATERING AND ACCOMMODATION OPERATIONS
CRAFT CERTIFICATE IN FOOD PROCESSING AND PRESERVATION TECHNOLOGY
CRAFT CERTIFICATE IN SCIENCE LABORATORY TECHNOLOGY
CRAFT CERTIFICATE IN FISHERIES SCIENCE AND TECHNOLOGY
CRAFT CERTIFICATE IN NUTRITION AND DIETETICS**

MODULE I

ICT, MATHEMATICS AND ENTREPRENEURSHIP

3 hours

INSTRUCTIONS TO CANDIDATES

You should have the following for this examination:

Answer booklet;

Scientific calculator fx-82 (non Programmable)/ Mathematical tables.

This paper consists of TWO sections; A and B.

Section A and B have 10 and 6 questions respectively.

Answer ALL questions in Section A and questions 11, 12 and 13 and ONE other question from section B in the answer booklet provided.

Candidates should answer the questions in English.

This paper consists of 6 printed pages.

**Candidates should check the question paper to ascertain that
all the pages are printed as indicated and that no questions are missing.**

SECTION A (40 marks)

Answer ALL the questions in this section.

1. Outline four features of a microcomputer. (4 marks)
2. Distinguish between *softcopy* output and *hardcopy* output as used in computer. (4 marks)
3. State the effect of pressing each of the following computer keyboard keys when working in a text editor:
 - (a) home;
 - (b) numlock;
 - (c) capslock;
 - (d) tab.(4 marks)
4. Explain each of the following terms as used in computers:
 - (i) firmware;
 - (ii) operating system.(4 marks)
5. Evaluate:
$$18 \div 8 \times -\frac{16}{9} + 40 - 6$$
(4 marks)
6. Convert:
 - (a) 20,000 millilitres to litres;
 - (b) 498 kilojoules to joules.(4 marks)
7. The daily sales S of a certain brand of cake is directly proportional to the population P of a town. When P is 40,000 people, S is Ksh 500,000. Determine S when P is 200,000 people. (4 marks)
8. Outline four factors that may discourage the growth of entrepreneurship in a country. (4 marks)

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9. Explain each of the following types of entrepreneurs:

- (a) acquirer;
- (b) promoter.

(4 marks)

10. Andrew is in the process of writing the financial plan section of his business plan. State four types of information that he should include in this section.

(4 marks)

SECTION B (60 marks)

Answer questions 11, 12, 13 and any other ONE question from this section.

11. (a) Explain the function of each following are commands used when editing a table created in a word processor:

- (i) merge cells;
- (ii) split cells;
- (iii) shading.

(6 marks)

(b) Distinguish between disk *formatting* and disk *partitioning* as used in an ICT operating system.

(4 marks)

- (c) (i) Explain the term *web browser* as used in computers.
- (ii) List **three** examples of web browsers.

(5 marks)

12. (a) The probability of two sewing machines A and B breaking down in a week's time are $\frac{1}{9}$ and $\frac{1}{6}$ respectively. Determine the probability that:

- (i) **both** break down;and
- (ii) **only one** breaks down in one week's time.

(4 marks)

(b) A retailer stocks oranges at a cost of Ksh 8 each. If he sells an orange at Ksh 13, calculate his percentage profit.

(4 marks)

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- (c) The hourly pay in Ksh for thirteen casual workers in a factory are as shown in the following distribution:

80, 40, 50, 20, 10, 30, 40
50, 90, 70, 40, 60, 70

Determine the :

- (i) median;
(ii) mode;and
(iii) mean of the distribution.

(7 marks)

13. (a) State **three** objectives that an organisation may seek to achieve through product promotion. (3 marks)
- (b) Explain **three** resource factors that an entrepreneur should consider when starting a business. (6 marks)
- (c) Explain **three** reasons that make it necessary for entrepreneurs to encourage innovative practices in their business. (6 marks)
14. (a) State **three** benefits of online shopping to customers. (3 marks)
- (b) Explain **three** ways in which an organisation may prevent virus infections in their computers. (6 marks)
- (c) Table 1 shows an extract from a spreadsheet program used by an importer of electronics to compute transactions. Study the table and use it to answer the questions that follow:

	A	B	C	D	E
1	PRODUCT	QUANTITY	IMPORT PRICE	IMPORT COST	IMPORT DUTY
2	Phone accessories	1800	150		
3	Solar lamps	950	200		
4	Electric bulbs	2000	100		
5	GRAND TOTAL				
6	IMPORT DUTY RATE	25%			

Using cell addresses only, write a spread sheet expression that would be used to determine:

- (i) import cost for electric bulbs given that import cost is the product of quantity and import price;
- (ii) grand total import cost for all the products;
- (iii) amount of import duty for solar lamps.

(6 marks)

15. (a) The equation of a straight line is given by $3y - x = 6$.

- (i) Express the equation in the form $y = mx + c$.
- (ii) Using the equation in (i), determine the:
 - (I) gradient;
 - (II) y-intercept.

(4 marks)

- (b) Figure 1 represents a piece of cloth in the shape of a trapezium ABCD. The shaded part is a circle of diameter 0.6 m cut off from the material. Determine the area of the piece of cloth left. (6 marks)

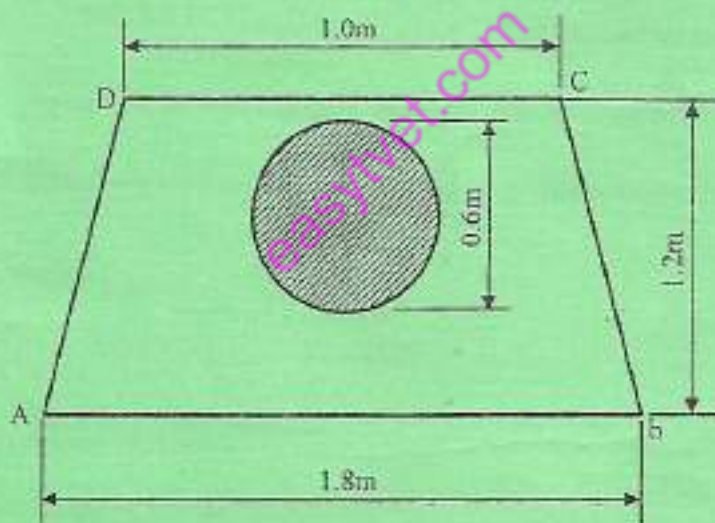


Fig. 1

- (c) Figure 2 shows a 2-Dimensional shape of a scone consisting of a conical top and a hemispherical bottom.

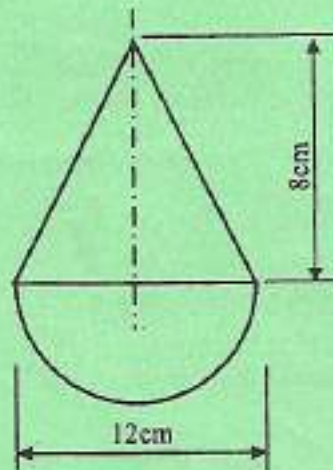


Fig. 2

Calculate the volume of the scone.

(5 marks)

16. ✓ (a) Outline **four** ways in which a business enterprise may be socially responsible to a community. (6 marks)
- (b) Explain **three** challenges that an entrepreneur may face when using information communication technologies (ICTs) in a business. (6 marks)
- (c) (i) Explain the term globalization as used in entrepreneurship;
- (ii) State **three** advantages of globalization to an entrepreneur.

(3 marks)

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