

1507/113      1819/101      1906/101  
1801/101      1901/101      1907/101  
1802/101      1903/101      1908/101  
1804/101      1904/101  
1805/101      1905/101

**ICT, MATHEMATICS AND  
ENTREPRENEURSHIP**

**June/July 2022**

**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 SOCIAL WORK AND COMMUNITY DEVELOPMENT**

**CRAFT CERTIFICATE IN FOOD PROCESSING AND PRESERVATION TECHNOLOGY**

**CRAFT CERTIFICATE IN SCIENCE LABORATORY TECHNOLOGY**

**CRAFT CERTIFICATE IN FISHERIES SCIENCE AND TECHNOLOGY**

**CRAFT CERTIFICATE IN SUSTAINABLE AND ECOLOGICAL AGRICULTURE**

**CRAFT CERTIFICATE IN BAKING 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 table.*

*This paper consists of TWO sections A and B.*

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

*Maximum marks for each part of a question are indicated.*

*Candidates should answer the questions in English.*

**This paper consists of 5 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. Explain each of the following terms as used in computing:
  - (a) program; (2 marks)
  - (b) data. (2 marks)
2. Outline **four** features of second generation computers that distinguish them from third generation computers. (4 marks)
3. Table I is an extract of a worksheet.

**Table I**

Cell	B9	B10	B11	B12	B13	B14
Data	420	Temperature	=D1 + D2	380	=C14	=sum(A4 : A5)

State the data type in each of the following cells:

- (a) B10 (1 mark)
  - (b) B11 (1 mark)
  - (c) B12 (1 mark)
  - (d) B14 (1 mark)
4. List **four** magnetic computer storage devices. (4 marks)
  5. Convert the following measurements:
    - (a)  $16\frac{1}{5}$  hours to minutes.
    - (b) 2.15 kilometres to metres. (4 marks)
  6. A sewing machine is stocked by a retail outlet at Ksh 30,000. If the retail outlet sells it to a tailor at Ksh 34,500, determine the percentage profit. (4 marks)
  7. A quantity  $y$  varies inversely as  $x$ . When  $x = 12, y = 36$ . Determine the:
    - (a) expression relating  $x$  and  $y$ .
    - (b) value of  $x$  when  $y = 48$  (4 marks)
  8. State **four** reasons that make effective external communication necessary in a business enterprise. (4 marks)

1507/113 1804/101 1901/101 1905/101 1908/101  
1801/101 1805/101 1903/101 1906/101  
1802/101 1819/101 1904/101 1907/101



9. Distinguish between an opportunistic entrepreneur and a promoter entrepreneur. (4 marks)
10. Bony is in the process of writing the management plan section of a business plan. Outline **four** types of information that he should include in this section. (4 marks)

**SECTION B (60 marks)**

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

11. (a) Distinguish between sign in and sign up as used in electronic mail. (4 marks)
- (b) (i) State **three** types of proofreading tools available in a word processor.  
(ii) Outline **two** ways of creating a table in a word processor. (5 marks)
- (c) Outline **three** differences between a local area network (LAN) and a metropolitan area network (MAN). (6 marks)
12. (a) Given the currency exchange rates:  
1 STG £ = Ksh 133  
1 US \$ = Ksh 102  
Convert:  
(i) 510 STG £ to Ksh.  
(ii) Ksh 86,700 to US \$. (4 marks)
- (b) A straight line is given by the equation  $3y = 2x + c$ . Given that the y-intercept is 2, determine the:  
(i) value of  $c$   
(ii) gradient. (4 marks)
- (c) The daily wages in Ksh of 10 casual workers are as follows:  
700, 550, 600, 750, 450, 500, 600, 800, 650, 900  
Determine the:  
(i) mean wage;  
(ii) standard deviation;  
(iii) mode. (7 marks)

1507/113 1804/101 1901/101 1905/101 1908/101  
1801/101 1805/101 1903/101 1906/101  
1802/101 1819/101 1904/101 1907/101



13. (a) Zuri Company intends to venture into a new market. State **four** ways in which the company may promote its products in this market. (4 marks)
- (b) Explain **three** reasons that make an entrepreneurial culture important in a country. (6 marks)
- (c) Highlight **five** challenges that may be faced by a sole proprietor in the course of doing business. (5 marks)
14. (a) State **four** advantages of general purpose software. (4 marks)
- (b) Explain each of the following terms as used in operating systems:
- (i) disk partitioning;
- (ii) disk defragmentation. (4 marks)
- (c) Table II shows an extract of house details from the database of a real estate agent.

**Table I**

House No.	House Type	Feature	Rent (Ksh)
AE001	Bungalow	Pond	45,000.00
AE008	Bungalow	Pool view	15,000.00
AE110	Detached	Waterfall	38,000.00
AE040	Terraced	Pool	42,000.00
AE007	Detached	Pool	32,000.00
AE004	Detached	Pond	18,000.00
AE118	Bungalow	Waterfall	33,000.000
AE089	Terraced	Courtyard	25,000.00
AE047	Bungalow	Pool	28,000.00
AE018	Bungalow	Courtyard	32,000.00

- (i) State the number of records contained in the table.
- (ii) State the most appropriate data type for each of the following fields citing a reason for the choice:
- I. House No.
- II. Rent
- (iii) Outline two benefits that the agent may derive from using a database management system. (7 marks)

1507/113 1804/101 1901/101 1905/101 1908/101  
 1801/101 1805/101 1903/101 1906/101  
 1802/101 1819/101 1904/101 1907/101



15. (a) Evaluate:

$$\left(\frac{3}{5} \div \frac{1}{2}\right) - \left(\frac{8}{9} \times \frac{3}{4}\right) + 2 \quad (4 \text{ marks})$$

(b) Two loaves of bread are picked at random from a large sample. If the probability that a loaf is underweight is  $\frac{3}{20}$ , determine the probability that:

- (i) both are underweight;
- (ii) only one is underweight. (5 marks)

(c) Figure 1 shows a cross-section of a block where part A is a cylinder and part B is a hemisphere.

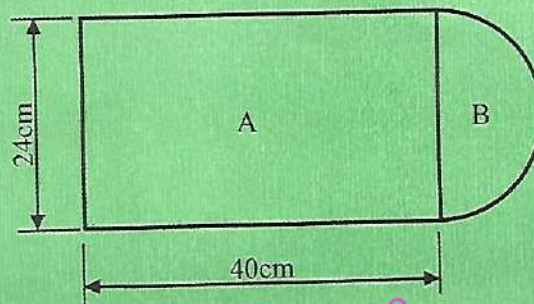


Fig. 1

Determine the volume of the block. (6 marks)

16. (a) State **five** characteristics of a good business idea. (5 marks)
- (b) Explain **three** benefits that an enterprise may derive from engaging in corporate social responsibility activities. (6 marks)
- (c) State **five** benefits of electronic commerce (e-commerce) to an enterprise. (4 marks)

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1507/113	1804/101	1901/101	1905/101	1908/101
1801/101	1805/101	1903/101	1906/101	
1802/101	1819/101	1904/101	1907/101	