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

ICT, MATHEMATICS AND ENTREPRENEURSHIP
Oct./Nov. 2018
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:
   Mathematical tables/a non programmable scientific calculator;
   Answer booklet.
This paper consists of TWO sections; A and B.
Answer ALL questions in Section A . Answer questions 11, 12 and 13 and ONE other question from section B .
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.

Turn over

SECTION A (40 marks)

Answer ALL the questions in this section.

1. List **two** examples of each of the following computer storage devices:

   (a) magnetic storage devices; (2 marks)

   (b) optical storage devices. (2 marks)

2. Distinguish between relative cell referencing and absolute cell referencing as used in spreadsheets. (4 marks)

3. Explain each of the following types of computer software:

   (a) utility software; (2 marks)

   (b) networking software. (2 marks)

4. Explain each of the following types of computers:

   (a) general purpose computers; (2 marks)

   (b) special purpose computers. (2 marks)

5. Simplify by rationalizing the denominator of the expression:

   $$\frac{5\sqrt{2}}{\sqrt{3}-\sqrt{2}}$$

   (4 marks)

6. Convert the measurements:

   (a) $18\frac{1}{3}$ hours to minutes. (2 marks)

   (b) 2.4 m³ to cm³. (2 marks)

7. A straight line passes through the point (1, 5) and (3, 21). Determine the equation of the line. (4 marks)

8. Explain the meaning of each of the following terms as used in entrepreneurship:

(a) innovation; (2 marks)

(b) enterprise culture. (2 marks)

9. In relation to the originality of an idea, distinguish between an entrepreneur and a business person. (4 marks)

10. Maxwell recently quit his job to venture into self-employment. Outline **four** factors that he should consider when starting the business. (4 marks)

SECTION B (60 marks)

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

11. (a) Explain each of the following terms as used in word processing:

(i) superscript;

(ii) footer;

(iii) auto correct.

(6 marks)

(b) Highlight **four** measures that may be taken to protect data stored in a computer from unauthorised access. (4 marks)

(c) (i) Distinguish between a local area network (LAN) and a metropolitan area network (MAN)

(ii) State **two** tools that may be used when setting up a local area network.

(5 marks)

12. (a) A manufacturer sells a machine at US$ 12,000. If a retailer resells it at a profit of 15%, calculate the retail price in Ksh.
Hint: exchange rate as 1 US$ = Ksh 87 (4 marks)

(b) The number of faults occurring in a production line in one month period is as shown in the distribution:

27, 37, 24, 31, 25, 27, 27, 30, 35.

Determine the:

(i) mode;

(ii) median;

(iii) standard deviation.

(11 marks)

13. (a) Small businesses are increasingly branding their products. Highlight **three** benefits of such branding.. (3 marks)

(b) State **four** purposes that a business plan may serve in an enterprise. (4 marks)

(c) Explain **four** areas where computer technology may be used in a small enterprise. (8 marks)

14. (a) Explain each of the following terms as used in operating systems:

(i) disk formatting;

(ii) disk compression;

(iii) booting. (6 marks)

(b) (i) Explain the term e-learning.

(ii) State **three** benefits of e-learning. (5 marks)

(c) State **two** differences between random acess memory (RAM) and read only memory (ROM). (4 marks)

15. (a) A five digit number is made by arranging five tags, labelled 1, 2, 3, 4, and 5. Determine the number of ways that this can be done such that the number is greater than 40000. (6 marks)

(b) The probability of event A happening is $\frac{3}{8}$ and the probability of event B happening is $\frac{2}{3}$. Calculate the probability that:

(i) both A and B happen;

(ii) none of the events happen;

(iii) either A or B happens. (9 marks)

16. (a) State **four** characteristics of a creative business environment. (4 marks)

(b) Explain **three** disadvantages of recruiting staff from within an organization. (6 marks)

(c) Outline **five** ways in which small enterprises may contribute to the economic development of a country. (5 marks)

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