

EXAMINATION NO. _____



2015 EXAMINATIONS

CERTIFICATE IN FINANCIAL ACCOUNTING PROGRAMME

PAPER FA 2 : PRACTICAL MATHEMATICS & COMPUTING

TUESDAY 2 JUNE 2015

**TIME ALLOWED: 3 HOURS
9.00 AM - 12.00 NOON**

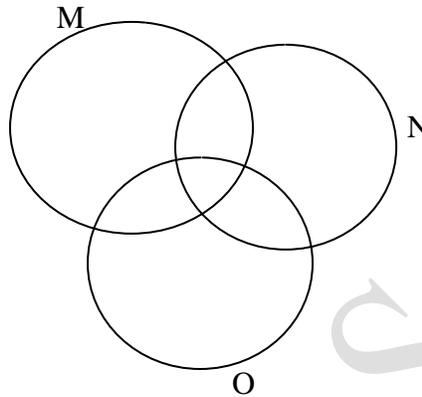
INSTRUCTIONS: -

1. You are allowed **15 minutes** reading time **before the examination begins** during which you should read the question paper and, if you wish, make annotations on the question paper. However, you are **not** allowed, **under any circumstances**, to open the answer book and start writing or use your calculator during this reading time.
2. Number of questions on paper – 7.
3. Answer **ALL** questions in **Section A** and any **TWO** questions in Section B.
4. Marks for each question are indicated.
5. Use of programmable calculators is **NOT** allowed.
6. All workings **must** be clearly shown.
7. Begin **each** answer on a fresh page.
8. This question paper must **NOT** be removed from the examination hall.
9. **DO NOT OPEN THIS PAPER UNTIL YOU ARE INSTRUCTED BY THE INVIGILATOR.**

This question paper contains 4 pages

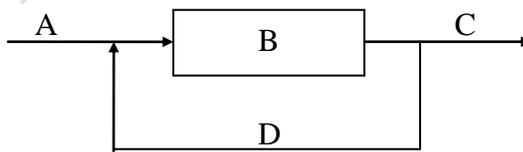
SECTION A**Answer ALL questions in this section**

1. (a) The venn diagram below represents ICAM students studying Business Communication, Business Accounting and Business Knowledge at a college. If $|M| = 300$, $|N| = 350$, $|O| = 450$, $|M \cap N| = 100$, $|M \cap O| = 150$, $|N \cap O| = 75$, $|M \cap N \cap O| = 10$

**Required:**

Calculate the following:

- (i) The number of students taking only one of these subjects. **9 Marks**
- (ii) The total number of students. **2 Marks**
- (b) The figure below shows a diagrammatic representation of four activities that convert raw data into information in an information system.

**Required:**

Identify activities A, B, C and D.

4 Marks
(TOTAL : 15 MARKS)

Continued/.....

2. (a) Solve the following equation:

$$\frac{x}{8} + \frac{3x}{16} = \frac{5}{x}$$

5 Marks

- (b) A survey conducted about job satisfaction at Goya Ltd showed that 20% of the workers were not happy with their current jobs. Two workers were selected at random to observe whether or not they were happy with their current jobs.

Required:

- (i) Draw a tree diagram showing all relevant outcomes and probabilities. **6 Marks**
- (ii) Find the probability that both workers are not happy with their current jobs. **2 Marks**
- (iii) Find the probability that at least one of them is happy with their current job. **2 Marks**
- (TOTAL : 15 MARKS)**

3. (a) Two shops, A and B, are selling similar TV sets at a price of K96,000. Shop A is offering a discount of 8% followed by a special offer at 3% off the discounted price. Shop B is offering a single discount of 11%.

Required:

What saving would be made by buying the set at the cheapest price? **5 Marks**

- (b) Mary worked the following hours during a week.

Day	Mon	Tue	Wed	Thurs	Fri	Sat	Sun
Hours worked	8	10	9	7	11	6	5

Her gross pay is K450 per hour for normal working hours. She is paid overtime at a rate of 1.5 for any extra hours worked beyond 8 from Monday to Friday. She is paid double time for all hours worked on Saturday and Sunday.

Required:

Calculate Mary's:

- (i) Gross pay, **8 Marks**
- (ii) Net pay if she pays 30% tax on all her earnings. **2 Marks**
- (TOTAL : 15 MARKS)**

Continued/.....

4. (a) Simplify $16^{-\frac{1}{2}} \times 64^{\frac{1}{3}} \div 32^{\frac{1}{6}}$ **5 Marks**
- (b) A computerized system may adopt different processing approaches, one of which is batch processing.

Required:

State any **three** advantages and **two** disadvantages of batch processing. **10 Marks**
(TOTAL : 15 MARKS)

SECTION B**Answer any TWO Questions from this section**

5. (a) State any **five** factors that you need to consider when selecting a printer. **10 Marks**
- (b) List any **five** advantages of networked computers over stand alone computers. **10 Marks**
(TOTAL : 20 MARKS)

6. An average grain field in Ndanga yields 20 bags of 50 kg per acre. It is assumed that a single person consumes 23 bags of grain per year and a bag of grain sells at K500.

Required:

- (a) How many acres of grain does a community of 300 people need? **4 Marks**
- (b) How many people can grain from 43 acres feed? **3 Marks**
- (c) How much money will a family of 4 need to buy the grain for the whole year (assuming they do not grow any)? **3 Marks**
- (d) How much is 10 acres of grain worth? **2 Marks**
- (e) Ndanga has a population of 4,800. What is the minimum acreage that should be planted with grain? (Give your answer to the nearest whole number). **3 Marks**
- (f) Last year Ndanga produced 140,000 bags of grain. How many bags of grain were available for sale to other villages? **3 Marks**
- (g) What was the value of the grain that was available for sale? **2 Marks**
(TOTAL : 20 MARKS)

Continued/.....

7. (a) Explain the difference between **qualitative** and **quantitative** data, giving **one** example of each. **4 Marks**
- (b) Classify **each** of the following data as either continuous or discrete:
- (i) The number of orange trees in an orchard. **1 Mark**
 - (ii) The height of orange trees. **1 Mark**
 - (iii) The number of oranges produced on each tree. **1 Mark**
 - (iv) The number of labourers required to pick the oranges within one day. **1 Mark**
 - (v) The time it takes to pick the oranges from a tree. **1 Mark**

- (c) The following data shows annual salaries (K'000) of 10 employees working for the same company.

16 18 20 58 22 24 20 32 20 10

Required:

Calculate the following:

- (i) Mode **1 Mark**
- (ii) Median **2 Marks**
- (iii) Mean **2 Marks**
- (iv) Range **2 Marks**
- (v) Standard deviation **4 Marks**

(TOTAL : 20 MARKS)

E N D