EXAMINATION NO.\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**2015 EXAMINATIONS**

**CERTIFICATE IN FINANCIAL ACCOUNTING PROGRAMME**

**PAPER FA 2 : PRACTICAL MATHEMATICS & COMPUTING**

**WEDNESDAY 2 DECEMBER 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 inSection 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 6 pages

###### SECTION A

###### Answer ALL questions in this section

1. (a) Round the following numbers to the level stated:

1. 23, 345 tons (to nearest 1000 tons) **1 Mark**
2. 23 months (to highest 10 months) **1 Mark**
3. 3.245mm (1 decimal place) **1 Mark**

(b) Convert:

1. 7810 to binary (base 2) **3 Marks**
2. 8B16 to decimal (base 10) **3 Marks**

(c) If A = (a, b, c, d, e, f, g); B = (e, f, g, h); C = (f, g); D = (f, h) and E = (a, b, c, d),

state whether the following are true or false:

1. B is a subset of A **1 Mark**
2. A is a subset of C **1 Mark**
3. C is a subset of B **1 Mark**
4. C = D **1 Mark**
5. If the universal set is (a b c d e f g h) then E is the complement of set B (i.e. E = ). **2 Marks**

**(TOTAL : 15 MARKS)**

**Continued/……**

2. (a) State the statistical measures required to find the following:

1. The most occurring value **1 Mark**
2. The value lying at the midpoint of an ordered distribution **1 Mark**
3. The difference between values at either end of a distribution. **1 Mark**

(b) State any **three** reasons why graphs are important in the presentation of information. **3 Marks**

(c) A man has 3 type A, 2 type B and 7 type C lorries for deliveries. All the lorries are used equally.

**Required:**

What is the probability that a lorry delivering goods will be (in simple form):

1. of type B **2 Marks**
2. not of type C **2 Marks**
3. of type A or C **2 Marks**

(d) List any **three** characteristics of ROM (Read Only Memory). **3 Marks**

**(TOTAL : 15 MARKS)**

1. (a) A piece of pipe which is 21 metres long is to be cut into two pieces in the ratio 2:5.

**Required:**

Find the length of each piece. **9 Marks**

(b) State the function of the following word processor features:

1. File management **2 Marks**
2. Spell checker **2 Marks**
3. Thesaurus **2 Marks**

**(TOTAL : 15 MARKS)**

**Continued/……**

1. (a) A salesperson selling used cars can be paid using two methods of commission.

Method *x* uses straight commission of 3.5% of the selling price of all the vehicles sold. Method *y* uses a fixed amount of K25,000 per week plus a commission of 1.5% of the selling price of all the vehicles sold.

**Required:**

If the total selling price of cars sold in each week is, on average, K2 million, advise the salesperson which method of commission to choose. **5 Marks**

1. (i) Explain the **three** basic classification of printers. **6 Marks**

(ii) What is the difference between an impact printer and a non-impact printer? Give an example of each. **4 Marks**

**(TOTAL : 15 MARKS)**

###### SECTION B

**Answer any TWO Questions from this section**

5. (a) State any **five** advantages of using off-the-shelf packages to designing a system

from scratch (bespoke). **5 Marks**

(b) Explain the meaning of the following:

1. Server computer **3 Marks**
2. Network computer **3 Marks**
3. Mainframe computer **3 Marks**
4. DWS pays a basic fixed electricity charge of K5,000 and then K45 per unit for the first 5,000 units and K38 per unit for units in excess of 5,000. The previous meter reading was 420434 and the present reading is 425714. DWS did not settle the previous bill of K3,475.

**Required:**

Calculate the present charge and show how much DWS should pay to clear/settle the bill. **6 Marks**

**(TOTAL : 20 MARKS)**

**Continued/……**

1. (a) Define the following terms as used in statistics:
2. Population **1 Mark**
3. Variable **1 Mark**
4. Sample **1 Mark**
5. Statistical inference **2 Marks**
6. Frequency **1 Mark**
7. Table **1 Mark**

(b) Over a period of 10 days a production department of Yewo Ltd produced the following output:

|  |  |
| --- | --- |
| Day  1  2  3  4  5  6  7  8  9  10 | Output  120  130  145  123  167  134  132  162  157  152 |

**Required:**

1. What is the mean daily production output? **3 Marks**
2. Calculate the range within which output fell. **2 Marks**

(iii) What is the standard deviation of the production output? **8 Marks**

**(TOTAL : 20 MARKS)**

**Continued/……**

7. (a) Factorize the following expression:

**4 Marks**

(b) A sum of K100,000 is to be invested over a period of 5 years.

**Required:**

Which of the following compound interests will give the best return?

A : 4.5 percent per annum

B : 3.5 percent in year one and rising to 4 percent, 4.5 percent, 5 percent and

5.5 percent in each of the subsequent four years. **8 Marks**

(c) The following are some checks that can be included in a validation program:

1. Limit check
2. Completeness
3. Format
4. Existence

**Required:**

Explain **each** of the checks. **8 Marks**

**(TOTAL : 20 MARKS)**

**E N D**