Catholic University Institute of Buea (CUIB)

2020/2021 ACADEMIC YEAR

First Semester Examinations – March 2021

EoC

School	BUSINESS				
Department	All DEPARTMENT				
Course Code	BUS 105	Course Title	BUSINESS MATHS AND STATISTICS		
Status	C	Credit Value	6		
Date	02/03/2021	Venue	Molyko	Time	8:00 – 10:00 am
Course Master(s)	MUKETE EMMANUEL				

Instructions: Answer all Questions

Question One: (10 marks)

a) Alice invested the sum of CFAF 540,000 in the Bafut Cooperative Credit Union on the 20th of March 2016 which offers an interest rate of 9%. Determine the simple interest that this sum will produce on the 27th of August 2016. **(2marks)**

b) Madam Jacky can discharge her liabilities now by paying CFAF 8000 now or 8,500CFAF in two years' time. Alternatively if money is worth only 7.5% compounded monthly, which of the options is better? **(3marks)**

c) Adama and Bessem invested CFAF 300,000 and CFAF 500,000 at 8% and 5% respectively on the same day and the interest rates on the investment are compounded yearly. Find how long it will take for the future value to be equal. **(3marks)**

d) The first term and the last term of an A.P are respectively –4 and 146, and the sum of the A.P = 7171. Find the number of terms of the A.P and also its common difference. **(2marks)**

Question Two: (12 marks)

ASCOA is a common initiative group which bought a computer for 500,000CFAF. It is estimated that the useful life will be 12 years at the end of which it shall be scrapped at one-fifth the original cost.

a) Find the rate of depreciation at which this aim will be realised using the diminishing balance method **(3 Marks)**

b) Use the calculated rate from '(a)' above [to the nearest whole number] to show in a table the depreciation schedule based on the Reducing Balance Method for the first six years of the life of the asset. **(6 Marks)**

c) Given that this asset was scrapped at 1/8 the original value after seven years using the constant balance method, what will be the annual depreciation in this case? **(3 Marks)**

Question Three: (10 marks)

Write short notes on the following

i) Ordinal Scale. **(2marks)**

ii) Continuous and Discrete Data. **(2marks)**

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iii) Grouped and Ungrouped Distribution. **(2marks)**

iv) Descriptive and Inferential Statistics. **(2marks)**

v) Nominal Data. **(2marks)**

Question Four: (8 marks)

The mean of the following frequency distribution was found to be 1.46

No. of Accidents	0	1	2	3	4	5
No. of Days (frequency)	46	**x**	**y**	25	10	5

Given that the sum of frequency is 200 days, calculate the missing frequencies in table above.

Question Five: (10 marks)

The distribution of the overdraft sizes of 400 bank customers are presented below.

Size (FCFA)	**No. of Customers**
Less than 100	82
100 but less than 200	122
200 but less than 300	86
300 but less than 400	54
400 but less than 500	40
500 but less than 600	16

82
204
290
344
384
400

Find the quartiles, the 4th decile and the 95th percentile of this distribution.

END

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