KIBABII UNIVERSITY

KNOWLEDGE FOR DEVELOPMENT

UNIVERSITY EXAMINATION 2020/2021

SCHOOL OF BUSINESS AND ECONOMICS

MAIN EXAMS

UNIT CODE: DIB 102

UNIT TITLE: QUANTITATIVE METHODS

13 - 5 - 2021

DATE: TIME: 8.00AM-10.00AM

ANSWER ALL QUESTIONS IN SECTION A, AND ANY OTHER THREE QUESTIONS IN SECTION B

SECTION A

QUESTION ONE

a) Write short notes on;

     i.   Venn diagrams   (3 marks)

    ii.   Independent Events and Dependent Events   (3 marks)

    iii. Equally Likely Events and Complement of an Event   (3 marks)

b) From a bag containing 5 white balls, 2 black balls, and 11 red balls, 1 ball is drawn. What is the probability that it is either black or red?   (5marks)

c) Give the Assumptions of Linear programming   (8 marks)

d) What do u understand by the terms Deciles and Percentiles   (3 marks)

SECTION B

QUESTION TWO

(a) A platform diving squad of 25 had 18 members who dive from 10m and 17 who dive from 4m. How many divide from both platforms?   (10 marks)

(b) Give and explain types of averages   (5 marks)

    (Total 15 marks)

QUESTION THREE

(a) Suppose a voter poll is taken in three states. In state A, 50% of voters support the liberal candidate, in state B, 60% of the voters support the liberal candidate, and in state C, 35% of the voters support the liberal candidate. Of the total population of the three states, 40% live in state A, 25% live in state B, and 35% live in state C. Given that a voter supports the liberal candidate, what is the probability that she lives in state B?By Bayes's formula,

    (7 marks)

(b) Joan gets quiz grades of 79, 82, and 69. She gets a 65 on her final exam. Find the weighted mean if the quizzes each count for 10% and the final exam counts for 70% of the final grade.   (8 marks)

    (Total 15 marks)

QUESTION FOUR

(a) Calculate the harmonic mean for the given below:

Calculate the harmonic mean for the given below: **Marks**	30-39	40-49	50-59	60-69	70-79	80-89	90-99
f	2	3	11	20	32	25	7

(10Marks)

(b) write short notes

(i)　　Quartile Deviation Or Semi-Interquartile Range　　　　(3Marks)

(ii)　　Kurtosis　　　　(2Marks)

(Total 15 marks)

QUESTION FIVE

(a) Give and explain the types of independent variables　　　　(Marks 4)

(b) $2(3x - 7) + 4(3x + 2) = 6(5x + 9) + 3$　　　　(marks 7)

(c) $2(3x + 2) - 20 > 8(x - 3)$　　　　(Marks 4)

(Total 15 marks)