JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF BUSINESS AND ECONOMICS

UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS ADMINISTRATION WITH IT

2ND YEAR 1ST SEMESTER 2019/2020 ACADEMIC YEAR

MAIN-EVENING

COURSE CODE: ABA 206

COURSE TITLE: Business Statistics

EXAM VENUE: **STREAM: (BBA)**

DATE: **EXAM SESSION:**

TIME: 2 HOURS

Instructions:

1. **Answer ALL questions in section A and ANY other 2 questions in section B**
2. **Candidates are advised not to write on the question paper.**
3. **Candidates must hand in their answer booklets to the invigilator while in the examination room**

1. a) State any five qualities of a good average (5mks)

   b) Over a number of product runs, the following distribution gives the number of items that were rejected (5mks)

Number of rejects	0-4	5-9	10-19	20-29	30-49
Number of runs	12	28	9	7	2

   For each class, write down the

   i) Lower and upper class limits

   ii) Lower and upper boundaries

   iii) Class width

   iv) Mid-point

   c) The marks of six students in a class are 80, 70,75,85,60 and 80.

   Find the median (5mks)

   d) Differentiate between discrete and continuous data giving an example in each case

   (5mks)

   e) Discuss any five methods of primary data collection (10mks)

2. a) i) State the main aim of Lorenz curve (2mks)

   ii) In the graph paper provided construct a Lorenz curve from the information given Below which gives the values or properties handled by a dealer over a six months Period. (8mks)

value of property (£ 000)	**Number of properties**
10 and less than 15	2
15 and less than 20	6
20 and less than 25	14
25 and less than 30	21
30 and less than 35	33
35 and less than 40	19
40 and less than 45	5
Total	**100**

b) i). Draw a histogram to represent the sales of men's shoes in a department store over a particular period. (6 mks)

Size	5	6	7	8	9	10	11	12
Sales	3	6	17	20	28	14	8	4

ii) State four advantages of arithmetic mean (4mks)

3. In a test to determine the working life of type of electric light bulb, one hundred bulbs were selected at random from a production and simultaneously connected to a power source. The following data show the number (of the original one hundred) still working at the end of successive periods of 100 hours, all bulbs having failed within 1000 hrs.

Elapsed time (hrs)	100	200	300	400	500	600	700	800	900
Number working	99	98	90	82	70	45	26	12	3

Graph these data using a cumulative frequency polygon and use it to estimate

a) The percentage of bulbs that lasted more than 750 hrs (12 mks)

b) The percentage of bulbs that did not last 350 hrs (4mks)

c) The minimum guaranteed life of a bulb that the company could quote in order that only 5% of customers would have cause for complaint. (4mks)

4. a) Complete the index number for 1996 from the following data by using weighted average of price relative method. (10mks)

Item	Price 1991 shs	Price 1996 shs	Quantities units
meat	25	50	100
fish	20	40	30
eggs	20	30	50
vegetable	10	18	100
fruit	30	45	50

b. explain any five shortcomings of consumer price index number(10mks)

5. a) Calculate arithmetic mean , median and mode from the data given below

Daily wages Sh.	No. of workers Sh.
30-35	5
35-40	8
40-45	10
45-50	6
50-55	3
55-60	2

b) In a post office, three clerks are assigned to process incoming mail. The first clerk B_1 Processes 40 percent, the second Clerk B_2 Processes 35 percent and the third clerk B_3, Processes 25 percent of the mail.

The first clerk has an error rate of 0.04, the second has an error rate of 0.06 and the third has an error rate of 0.03. A mail selected at random from a day's output is found to have an error. The post master wishes to know the probability that the mail was processed by the first, second or third clerk respectively. (10mks)