THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

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MAIN EXAMINATION

JANUARY – APRIL 2018 TRIMESTER

FACULTY OF ARTS AND SOCIAL SCIENCES

DEPARTMENT OF DEVELOPMENT STUDIES

REGULAR PROGRAMME

SDS 311: STATISTICAL TECHNIQUES

Date: APRIL 2018	**Duration: 2 Hours**
INSTRUCTIONS: Answer Question ONE and ANY OTHER TWO Questions	

Q1. a) Differentiate between:

a) Descriptive and inferential statistics **(3marks)**
b) Quantitative and qualitative techniques **(3marks)**
c) Parametric and non-parametric statistics **(3marks)**
d) Nominal and ordinal scale **(3marks)**
e) Independent and dependent variables **(3marks)**

b) You are provided with the following set of data

Data set-high temperature for 50 days

57	**39**	**52**	**52**	**43**
50	**53**	**42**	**58**	**55**
58	**50**	**53**	**50**	**49**
45	**49**	**51**	**44**	**54**
49	**57**	**55**	**59**	**45**
50	**45**	**51**	**54**	**58**
53	**49**	**52**	**51**	**41**
52	**40**	**44**	**49**	**45**
43	**47**	**47**	**43**	**51**
45	**55**	**46**	**54**	**41**

Using two as the class interval, construct a grouped frequency distribution **(15marks)**

Q2. The following figures relate to the preferences with regard to size of screen (in inches) of T.V. sets of 30 persons selected at random from a locality.

12	20	12	24	29
20	12	20	29	24
24	20	12	20	24
29	24	24	20	24
24	20	24	24	12
24	20	29	24	24

Use the above data to construct a simple frequency table and find:

i) Modal size of the T.V. screen. **(10marks)**

ii) Mean size of the screen **(10marks)**

Q3. The following data pertains to 1,500 workers working in an industrial establishment. Their age is classified as follows:

Age (yrs)	No. of workers	Age (yrs)	No. of workers
18 – 22	120	38 – 42	184
22 – 26	125	42 – 46	162
26 – 30	280	46 – 50	86
30 – 34	260	50 – 54	75
34 – 38	155	54 – 58	53

i) Calculate the median age. **(10marks)**

ii) Calculate the interquartile range **(10marks)**

Q4. The following are the figures of profits earned by 1,400 companies during 2010 – 2011.

Profits ($)	**No. of Companies**	**Profits ($)**	**No. of Companies**
200 – 400	500	1000 – 1200	100
400 – 600	300	1200 – 1400	80
600 – 800	280	1400 – 1600	20
800 – 1000	120		

i) Calculate the average profits for all the companies. **(15marks)**

ii) Describe the merits and demerits of the mean **(5marks)**

Q5. You are provided with the following set of data between reading and spelling.

Reading	Spelling
3	11
7	1
2	19
9	5
8	17
4	3
1	15
10	9
6	15
5	8

i) Draw a scatter plot on the provided graph paper **(10marks)**

ii) Compute a Pearson's product moment correlation coefficient and comment on your findings **(10marks)**

END