THE CATHOLIC UNIVERSITY OF EASTERN AFRICA

A. M. E. C. E. A

MAIN EXAMINATION

JANUARY – APRIL 2019 TRIMESTER

FACULTY OF EDUCATION

DEPARTMENT OF POSTGRADUATE STUDIES IN EDUCATION

REGULAR / ODEL PROGRAMME

ED 508: DATA PROCESSING AND COMPUTER APPLICATION

Date: APRIL 2019	Duration: 3 Hours
INSTRUCTIONS: Answer any FOUR Questions	

Q1. a) Using employee data on SPSS, construct a linear regression model (equation) to determine the best predictor of the employment category an employee is likely to fall into once hired. Use educational level, previous experience, employee code and date of birth as your likely predictors (save your data as Q1data) **(5.5 marks)**

   b) From your findings, which is the most likely predictor of the employment category an employee is likely to be in? Explain your answer **(5 marks)**

   c) Using the order in which the items are ranked in your findings, from the lowest to the highest predictor, give your opinion to justify the position of each predictor variable in the ranking **(7 marks)**

Q2. a) Using employee data in SPSS conduct an independent samples t-test to test the hypothesis that there is no significant statistical difference between the salaries of clerks and those of custodians. (save your data as Q2data) **(5.5 marks)**

   b) Using a significant level of 0.05 to test your hypothesis, discuss the findings and give your conclusion **(12 marks)**

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Q3.   The following data were collected on scores of three subjects from ten students.

History	Mathematics	Physics
70.00	40.00	42.00
50.00	55.00	54.00
60.00	45.00	43.00
77.00	44.00	41.00
66.00	35.00	37.00
80.00	50.00	49.00
88.00	33.00	35.00
90.00	20.00	20.00
54.00	30.00	31.00
68.00	40.00	42.00

a) Prepare and key in the data on SPSS. (save your data as Q3data)   **(5 marks)**

b) Conduct a Pearson correlation to determine whether there is any correlation between History and Mathematics, History and Physics, Mathematics and Physics. (save your data as Q3boutput)   **(3.5 marks)**

c) For each correlation give the direction, strength and implications of the correlation between

      i)   History and Mathematics   **(3 marks)**
      ii)   History and Physics   **(3 marks)**
      iii)   Mathematics and Physics   **(3 marks)**

Q4.   a)   Using employee data, conduct a chi-square test to test the null hypothesis that there is no significant statistical relationship between the current salary of employees and the months since they were hired. (save output as Q4output)   **(5.5 marks)**

      b)   Interpret your findings and draw conclusions   **(12 marks)**

Q5.   a)   The questionnaire attached overleaf was prepared for a particular sample of subjects in the field. Code and attach the questionnaire to your answer booklet.   **(2.5 marks)**

      b)   Prepare and key in the data into SPSS. (Save your data as Q5bdata).   **(5 marks)**

      c)   Using employee data on SPSS, generate the descriptive statistics for the level of education among the employees. (Save your output as Q5coutput).   **(3 marks)**

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d) Give your observation of the outcome **(5 marks)**

e) What purpose do the descriptive statistics serve in data analysis? **(2 marks)**

ATTACHMENT FOR Q5 (a) and (b)

QUESTIONNAIRE FOR TEACHERS

Instructions to respondents

Place a tick (√) in the bracket in front of the most appropriate responses and where explanation is required, use the space provided below the items

SECTION A: DEMOGRAPHIC INFORMATION

1. Your gender

    Male (√)

    Female ( )

2. Level of Education

    Masters degree ( )

    Bachelor of Education degree(√)

    Diploma in Education ( )

    Others (please specify) _____

3. Teaching experience

    Less than one year ( )

    1 – 3 years ( )

    4 – 6 years (√)

    7 – 9 years ( )

    10 years and above ( )

4. Subject of specialization _____

5. How long have you been teaching in this school?

    Less than one year ( )

    1 – 3 years ( )

    4 – 6 years (√)

    7 – 9 years ( )

    10 years and above ( )

SECTION B: HOW ACADEMIC PERFORMANC INFLUENCES PARENT'S CHOICE OF PRIVATE BOARDING SECONDARY SCHOOLS.

Place a tick (√) in the most appropriate responses(SA = Strongly agree, A = Agree, U = undecided, SD = Strongly disagree, D = Disagree)

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6.

STATEMENTS	SA	A	U	SD	D
Parents are attracted to this school due to its academic performance.	√				
Teachers are dedicated to their work.		√			
Students are exposed to co-curricular activities such as music, sports, and spiritual programs.		√			
The school has good physical facilities		√			
Small class size is also anattraction		√			

END

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