



UNIVERSITY OF EDUCATION, WINNEBA  
INSTITUTE FOR TEACHER EDUCATION AND CONTINUING  
PROFESSIONAL DEVELOPMENT (ITECPD)



END-OF-SECOND SEMESTER EXAMINATIONS, NOVEMBER, 2023

LEVEL 400

COURSE CODE: JBM 482

COURSE TITLE: LEARNING, TEACHING AND APPLYING HANDLING  
DATA

TIME ALLOWED: 2 HRS

STUDENT'S INDEX NUMBER:

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**GENERAL INSTRUCTIONS:**

- This paper is made up of ONE SECTION.
- The Section is made up of five essay type questions.
- Answer any THREE questions in your answer booklet.
- Each question carries equal marks. You are expected to start each question on a new page.
- You are expected to hand over your answer booklet to the invigilator before you leave the examination hall.

**Instruction:** Answer any three (3) questions in the answer booklet provided.

- a. Mention three ethical consideration when collecting data.
  - b. Kofi, a student of Zombi College of Education takes four tests and scores the following marks: 65, 72, 58, 77.
    - i. What are his median and mean scores?
    - ii. If he scores 70 in his next test, find his new mean and median score.
    - iii. Which has increased most, his mean score or median score?
- 2 Two applicants A and B, seeking admission into a college of education ranked eight colleges in terms of their preferences. The colleges A, B, C, D, E, F, G and H. The table shows how they selected the colleges.

Position	1 <sup>st</sup>	2 <sup>nd</sup>	3 <sup>rd</sup>	4 <sup>th</sup>	5 <sup>th</sup>	6 <sup>th</sup>	7 <sup>th</sup>	8 <sup>th</sup>
Applicant 1	D	C	E	A	H	F	B	G
Applicant 2	E	D	C	A	B	G	F	H



Calculate the Spearman rank correlation coefficient and comment on your results.

- 3 a. Explain the following sampling techniques:
  - i. Stratified sampling
  - ii. Cluster sampling
  - iii. Systematic sampling
- b. Explain how you will guide a level 100 college student to find the median of the height (inches) of 12 randomly selected college females: 68, 65, 63, 71, 61, 66, 67, 64, 66, 63, 63, 60
- 4 a. How many permutations can be made from the letters of the word **MATHEMATICS**?
- b. A bag contains 7 black and 4 white balls. If two balls are drawn at random one after the other without replacement, find the probability that
  - i. both balls are black
  - ii. the balls are each of the same colour
  - iii. at least one ball is white.

- 5 The data below shows the total annual income (in GHC10,000) of selected workers in a given year.

43	68	43	34	59	55	42	73	71	73
75	71	84	43	36	68	57	77	76	62
59	62	69	31	60	82	88	68	59	81
51	75	79	51	62	41	50	74	82	61
56	66	75	52	59	44	58	51	58	72
62	72	50	46						

- a. Draw a stem and leaf plot for the data
- b. use your stem and leaf plot to find
  - i. The median
  - ii. the 1<sup>st</sup> quartile
  - iii. the 3<sup>rd</sup> quartile
- c. Construct a boxplot for the data.

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