



NATIONAL OPEN UNIVERSITY OF NIGERIA
Plot 91, Cadastral Zone, Nnamdi Azikiwe Express Way, Jabi - Abuja
FACULTY OF MANAGEMENT SCIENCES
2023_1 POP EXAMINATION.

COURSE CODE: BUS 722

COURSE TITLE: Business Statistics

CREDIT UNIT: 2

INSTRUCTION: 1. Indicate your Matriculation Number clearly

2. Attempt question one (1) and any other two (2) questions; three questions in all

3. Question one (1) is compulsory and carries 30 marks, while the other questions carry 20 marks each.

4. Present all your points in a coherent and orderly Manner

TIME ALLOWED: 2 Hours

Q1) Three tutors are assigned to mark the assignments of Hotel and Catering

Management Students in the National Open University. The tutor B1 marks 45 % of the assignment, the second tutor, B2, marks 35% of the assignment and the third tutor B3 marks 20% of the assignment.

The course coordinator vetted the marking and it is formed that the first tutor has an error of 0.03, the second 0.05 and the third 0.04. If a script selected is found to have an error, what is the probability that, the script was marked by the first second or third tutor respectively?

20 Marks

1b) It is known from experience that for a particular type of seedling, 3 out of 5 them transplanted will survive. Suppose two of the seedlings are picked at random, what is the probability that:

- (i) Both of them survived
 - (ii) The first survives and the second does not survive.
 - (iii) The first does not survive and the second survives (iv) None of the them survives
- 10 Marks**

2a. There are 10 positions available to be filled by 10 persons from 5 tribes in Nigeria on equal basis. How many distinguishable arrangements are possible based on tribes?

4 marks

2b Find the value of

- (i) 12. (ii) 15 (iii) 10

3

5

4

6 marks

2c if a couple makes a 6 trials at birth and records 2 male children. What is probability of having a success, if the birth of a male child is regarded as a success? 5 marks

2d. With the aid of example and diagram(s), show when events are mutually exclusive and equally likely events. 5 marks

3a. Consider the table below which gives the details of price and consumption of four commodities for 2020 and 2022. Using an appropriate formula calculate an index number for 2022 prices with 2020 as base year.

10 Marks

Commodities	Price per unit 2020 (₦)	Price per unit 2022 (₦)	Consumption value 2020 (₦)
Yam flour	70	85	1400
Vegetable oil	45	50	720
Beans	90	110	900
Beef	100	125	600

3b. (i) What is statistics 5 Marks

(ii) What the role of statistics to human life 5 Marks

4a. Explain three non-probability sampling methods 10 Marks

b. What are the advantages of telephone interview 5 marks

c. Is there any disadvantage(s) in personal interview method of data collection 5 marks

Q5) For the table presented below prepare

(i) The frequency distribution for the class interval 11-20, 21-30, 31-40.....

(ii) Cumulative Frequency distribution.

(iii) Relative Frequency.

(v) Cumulative Relative Frequency Distribution

Ages of 100 Employees

58	37	21	28	27	24	27	39	38	30
60	20	30	50	44	33	23	26	31	32
18	23	41	32	27	42	40	29	28	34
56	19	28	29	23	47	29	24	31	34
30	19	22	53	49	26	16	38	42	36
41	32	33	20	31	36	32	32	31	32
21	24	55	21	24	34	37	29	33	32
32	49	38	48	33	43	26	38	30	28
24	46	15	43	43	23	23	28	34	28
41	23	25	19	51	23	36	31	35	31

[20 marks]