

THE OPEN UNIVERSITY OF SRI LANKA

B.Sc. /B.Ed. Degree Programme, Continuing Education Programme

APPLIED MATHEMATICS/OPEN ELECTIVE -LEVEL 03

ADU3201/ADU3218- Basic Statistics

OPEN BOOK TEST 2024/2025



Date: 23.08.2024

Time: 9.00 a.m. - 10.00 a.m.

ANSWER ALL QUESTIONS

1. (a) Write down whether the following variables are qualitative or quantitative. If it is quantitative, check whether it is continuous or discrete; if it is qualitative, check whether it is nominal or ordinal.

- i) Gender (Male, Female)
- ii) NVQ Levels (level 1, Level 2, Level 3, Level 4, Level 5)
- iii) Temperature of a sample ($^{\circ}\text{C}$)
- iv) Number of passengers in a bus
- v) Education level (up to O/L, up to A/L, Graduate) of a person

- (b) Draw the most suitable diagrams for the following cases:

- i) The cropping pattern in a country in the year 1974-75 was as follows.

Crops	Area in 1000 hectares
Cereals	3940
Oilseeds	1165
Pulses	464
Cotton	249
Others	822

- ii) The given diagram shows the sales details of a company.

Year	Sales (Rs.in 10^5)	Gross Profit (Rs.in 10^5)	Net Profit (Rs.in 10^5)
1974	100	30	10
1975	120	40	15
1976	130	45	25
1977	150	50	25

- iii) The table below shows the population of four cities in a country in 1991.

State	Population in 10^5
City A	663
City B	448
City C	290
City D	556
Total	1957

Continued

2. The following data shows the number of touchdown passes (TD passes) thrown by each of the 31 teams in the National Football League in the 2000.

37, 33, 33, 32, 29, 28, 28, 23, 22, 22, 22, 21, 21, 21, 20, 20, 19, 19, 18, 18, 18, 18, 16, 15, 14, 14, 14, 12, 12, 9, 6

- (a) Find the
- i) Mean
 - ii) Median
 - iii) Mode
 - iv) Inter Quartile Range (IQR)
- (b) Prepare the frequency table by choosing a suitable class width and create the histogram.
