The Open University of Sri Lanka

B.Sc/B.Ed. DEGREE, CONTINUING EDUCATION PROGRAMME

No Book Test (NBT) 2016/2017

Level 05 - Applied Mathematics

PCU3141/ PCE5141/ PCU1142/ PCE3142/ PSU1182– Bio Statistics

Date: - 30.09.2017   **Time: 2.30 p.m. – 3.30p.m.**

Instructions

- This examination is of **one hour** duration.
- Answer all questions.
- Each of the two questions is allocated fifty marks.
- Non-programmable calculators are permitted.

1. The following table was constructed from the heights of 120 plants at its first blossom.

Length (cm)	Number of plants
5 – 9	13
10 – 14	27
15 – 19	54
20 – 24	16
25 – 29	10

i) Find the sample mean and explain what it measures in relation to this study.

ii) Find the midpoint of the class that contains the sample median.

iii) Find the cumulative frequency of the 4th class interval.

iv) Find the proportion of plants in the sample that had exceeded 20cm prior to blossom.

v) State whether each of the following will be highlighted from a frequency polygon of the data or not. You **need not** construct the frequency plot.

    a) Mode

    b) Median

    c) Inter-quartile range

    d) Presence of extreme observations

    e) Range

2. State whether each of the following statements is true or false.

    a) Pie charts display information about the quartiles of the data.

    b) Pie charts covey information about the dispersion of the data.

    c) Box plots convey information about the inter-quartile range of the data.

    d) Cumulative frequency plots display information about the dispersion of the data.

    e) Mode is not a meaningful measure for nominal data.

    f) Ranks of players in a 200m run are ordinal data.

    g) Inter-quartile range of data is always smaller than the range of the data.

    h) Inter-quartile range of the data is a measure of dispersion that is not sensitive to the presence of extreme observations in the data.

    i) Coefficient of variation is a measure of dispersion of the data.

    j) Bar charts convey information about the dispersion of the data.