EASTERN UNIVERSITY, SRI LANKA
DEPARTMENT OF MATHEMATICS
EXTERNAL DEGREE EXAMINATION IN SCIENCE – 2008 / 2009
FIRST YEAR SECOND SEMESTER (March / May, 2016)
EXTCC 106 – BIO STATISTICS
(REPEAT)

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ll questions
l tables and calculators will be provided

Time : **One** hour

) A student has collected the following data to understand the length (X in cm) of newly introduced pencils.

Classes of length	Frequency (f)
20-25	11
25-30	15
30-35	16
35-40	18
40-45	30
45-50	10

Find the mean, median and mode of length of the pencils.

) Data on diameter (mm) and height (cm) of plants of certain species are given in following table.

Diameter (X)	Height (Y)	X^2	Y^2	XY
2	5	4	25	10
3	7	9	49	21
4	10	16	100	40
5	15	25	225	75
6	20	36	400	120

(i) Briefly comment on the relationship between the diameter and the height using coefficient of correlation.

(ii) Fit a regression model of the form, $Y=\beta_0+\beta_1 X$, where β_0 and β_1 are arbitrary real constants, for the above data and estimate the height of a plant having the diameter of 7mm.

(P.T.O)

02. (a) Find the probability of getting exactly 2 heads in 6 tosses of a fair coin?

(b) From data collected over a year, it is calculated that the mean number of accident in a
2.2 per month. What is the probability of getting a month with
(i) no accident;
(ii) one accident;
(iii) two accidents.

(c) Life time of a certain chemical is normally distributed with mean 300 days and standar
10 days. What is the probability that the life time of a selected sample of chemical will
than 320 days?