SOUTH EASTERN UNIVERSITY OF SRI LANKA

FIRST YEAR EXAMINATION IN BACHELOR OF BUSINESS ADMINISTRATION / COMMERCE (EXTERNAL) – 2009 / 2010

HELD IN AUGUST – 2010

BBA / COM 13 (II) – STATISTICS

Answer five (05) questions Only.

Time : 03 hours.

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01. a) Explain briefly the statistical terms.

 i. Mean   ii. Median

 iii. Mode   iv. Quartiles

 b) The height of 100 students (cm) are selected at random and arranged in the following table.

Height	Number of Students
100 – 110	05
110 – 120	07
120 – 130	20
130 – 140	30
140 – 150	25
150 – 160	10
160 – 170	03

Using the above data find the following.

 i. Mean, Median, Mode

 ii. Quartiles Q_1, Q_3

02. a) Explain briefly the following statistical terms.

 i. Variance   ii. Standard deviation   iii. Co-efficient of variance

 b) The below table shows the marks obtained by 50 students in an examination.

Marks	0 – 5	5 – 10	10 – 15	15 – 20	20 – 25
Number of Students	3	12	20	10	5

Find the following.

 i. Variance

 ii. Standard deviation

iii.   Co-efficient of variance

iv.   Explain the shape of the distribution.

03.   The weight of 39 oranges in grams selected at random are given below.

90	75	92	100	83	115	119	99	82	95
77	84	112	90	87	110	115	92	72	98
75	78	93	112	117	98	84	87	72	90
80	95	105	107	112	78	87	97	105	

Using the above data find the following.

i.   Construed stem and leaf.

ii.   Using stem and leaf draw histogram.

iii.   Draw box and whisker plot.

iv.   Explain briefly the shape of the distribution.

04.   a)   Explain briefly the binomial distribution.

        b)   20% of the computers manufactured by a company are defective. 6 computers are selected at random then find the probability that.

            i.   Exactly only on computer is defective

            ii.   At least 3 computers are defective

            iii.   More then 3 computers defective

05.   a)   Explain briefly the Poisson distribution. Write in which the situation Poisson distribution applicability.

        b)   The average number of plane calls per one hour duration coming into the office is 4.5 find the probability that.

            i.   None of the phone calls during one hour period.

            ii.   None of the phone calls during 20 minutes period.

            iii.   Exactly 3 phone calls during 40 minutes period.

            iv.   More them 4 phone calls during 1 hour and 20 minutes period time.

06.   a)   Explain briefly the normal distribution and write the properties of normal distribution

      b)   The salary of employees in a company is normally distributed with mean Rs. 15000/= and standard deviation Rs. 2000/=. There are 5000 employees are working in this company then find me numbers of employees who earning satary.

          i.   Lass than Rs. 10,000 /=

          ii.   More then Rs. 20,000 /=

          iii.   Between Rs. 16,000/= and Rs. 18,000/=

          iv.   Between Rs. 12,500/= and Rs. 14,500/=

          v.   Between Rs. 13,000/= and Rs. 16,500/=

07.   a)   Explain simple regression?

      b)   The data collected between independent variable (X) and dependent variable (Y) are given below table.

X	3	5	6	8	9	11
Y	2	3	4	6	7	8

Using these data find the following.

          i.   Draw scatter diagram.

          ii.   Using your scatter diagram can you find any relationship between variables. X and Y.

          iii.   Estimate the simple regression line equation.

          iv.   Estimate of when X = 4,   X = 15.

          v.   Find the correlation between X and Y

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