INSTITUTE OF INDIGENOUS MEDICINE, UNIVERSITY OF COLOMBO, RAJAGIRIYA

BAMS LEVEL II – SECOND SEMESTER EXAMINATION – JUNE 2018

RESEARCH METHODOLOGY AND BIO STATISTICS - II

COURSE CODE – SW 2201

Time: 1 hour

2.00 p.m. – 3.00 p.m.

Answer all questions. **Index No**

Structured Questions

01 a) What is the definition of standard error of the mean (SEM)? **(03 Marks)**

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b) Write the formula of the standard error of the mean (SEM). **(03 Marks)**

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c) Find SEM of a sample distribution whose standard deviation is 36 and sample size is 64. **(06 Marks)**

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d) The following figures represent the weights (in pounds) of five new born babies at general hospital in a given day.

8, 6,7,9,5.

Calculate the mean weight and standard deviation of the babies' weight. **(08 Marks)**

02. a) What are the differences between "Z- test" and "Student t –test"? **(06 Marks)**

b) An examiner claim that the average systolic blood pressure of college students is no more than 110 mmHg. To this claim a random sample of 150 students was taken and checked their systolic blood pressure. Their average systolic blood pressure came to 112 mmHg with a SD of 7. At level of significance of 0.01, test if the claim of the examiner is justified.

(At level of 0.01, Z = 2.58) **(14 Marks)**

Essay Questions

01 a) Explain the region of acceptance? **(10 Marks)**

b) To test the spending habits of female students at the college, a sample of **5** female students was randomly selected and asked as how much money nearest to rupees did they spend on their cloths per month.

Their responses are recorded below;

1000, 700, 500, 800, 500

i) Calculate sample mean and sample standard deviation. **(20 Marks)**

ii) Assuming that the population is normally distributed, constructed a 95% confidence interval for the true average amount in rupees spent by all the female students at the college per month.

(At 95% with df (4), t- table value = 2.77) **(30 Marks)**

13.08.2018

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