

INSTITUTE OF INDIGENOUS MEDICINE, UNIVERSITY OF COLOMBO, RAJAGIRIYA

BAMS LEVEL II – SECOND SEMESTER EXAMINATION – JANUARY 2017

RESEARCH METHODOLOGY AND BIO STATISTICS

COURSE CODE – SW 2201

**Time: 01 hour
(9.00 a.m – 10.00 a.m)**

Index no

--

Answer all questions

Structured Questions

1) i) What is the normal distribution? (02 Marks)

.....

.....

.....

.....

.....

.....

ii) Name properties of normal distribution. (08 Marks)

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

iii) The study of blood pressure (BP) of workers gave a normal distribution of systolic BP close to normal with mean of 130 mm of Hg and a SD of 27 mm of Hg. A random sample of 36 workers is taken. μ

What is the probability that the sample mean will be greater than 140mm of Hg.?

(10 Marks)

z	0.00	0.01	0.02	0.03
0.0	0.0000	0.0040	0.0080	0.0126
1.1	0.398	0.0438	0.0478	0.0517
2.2	0.4661	0.4665	0.4668	0.4671

AREA UNDER THE NORMAL CURVE.

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

.....

2. i) What is a confidence interval?

(05 Marks)

.....
.....
.....
.....
.....

ii) What are the information we need to express the confidence interval?

(05 Marks)

.....
.....
.....
.....
.....

iii) A simple random sample with $n = 54$ provided a sample mean of 22.5 and a standard deviation of 4.4.

Develop a 95% confidence interval for the population mean.

(10 Marks)

.....
.....
.....
.....
.....
.....
.....
.....
.....
.....

(At 95%, $Z = 1.96$)

Essay Questions

1) i) Explain the region of acceptance? (05 Marks)

ii) What are the steps in hypothesis testing? (10 Marks)

iii) The mean weight of a tablet of a certain drug is said to be 40 milligrams. A sample of 64 tablets shows a mean weight of 39.85 milligrams with a standard deviation of 0.35 milligrams. Using a 0.05 level of significance, can conclude that the desired weight of the tablet is not properly maintained?

Answer should do

a) With reference to a P-value and (15 Marks)

b) With reference to a region of acceptance. (30 Marks)

(At 0.05, $Z = 1.96$.)

08.02.2017
