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EXAMINATIONS
Institute of Indigenous Medicine
19 SEP 2020
University of Colombo

INSTITUTE OF INDIGENOUS MEDICINE, UNIVERSITY OF COLOMBO
DEGREE OF BACHELOR OF AYURVEDA MEDICINE AND SURGERY/
DEGREE OF BACHELOR OF UNANI MEDICINE AND SURGERY
LEVEL II – FIRST SEMESTER SUPPLEMENTARY EXAMINATION
SEPTEMBER - OCTOBER 2020
SW 2101/TS 2102 - RESEARCH METHODOLOGY & BIO STATISTICS

Date: 19.09.2020
Time: 9.00 am – 10.00 am

Answer all questions.

Index No

Part I - Structured Questions

1.

1.1. What is presentation of data in Statistics?

(03 Marks)

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1.2. What are the types of data presentations?

(03 Marks)

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1.3. Discuss the purpose of measures of central tendency. (02 Marks)

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1.4. The final marks obtained by the students ranged from a low of 20 to a high of 98. The lecturer arranged the scores into 4 groups with a class interval of 20 points. The data in a frequency distribution as follows:

<u>Class Interval</u>	<u>Frequency</u>
20 and less than 40	05
40 and less than 60	15
60 and less than 80	23
80 and less than 100	07
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Total	50.

a) Find the average score in the final marks. (02 Marks)

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b) Compute the variance and the standard deviation of this data set.

(10 Marks)

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$$S = \sqrt{\frac{n\sum fx^2 - (\sum fx)^2}{n(n-1)}}$$

2.1. Why is a research problem known to be the most important part of a thesis or dissertation? (04 Marks)

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2.2. The following table gives the height (in inches) of 100 students in a college,

<u>Class interval</u>	<u>Frequency</u>
60 up to 62	05
62 „ 64	18
64 „ 66	42
66 „ 68	20
68 „ 70	08
70 „ 72	07
Total	100

Calculate.

a) The mean (02 Marks)

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b) Standard deviation.

(05 Marks)

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c) Median.

(05 Marks)

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d) Q_3

(04 Marks)

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$$\bar{x} = \frac{\sum f(x)}{\sum f}$$

$$s = \sqrt{\frac{n \sum fx^2 - (\sum fx)^2}{n(n-1)}}$$

Part II – Essay Questions

- 1.1. What are the properties of normal distribution? (06 Marks)
- 1.2. What are the characteristics of quantitative research? (04 Marks)
- 1.3. The final examination scores in statistics are normally distributed with an average score of 70 and a standard deviation of 5.
- a) If the lowest passing grade is 58, what percentage of the class is failing? (10 Marks)
- b) Find the proportion of students who score between 75 and 85 marks. (15 Marks)
- c) If the lecturer gives grades and everybody getting 82 or above gets a grade of A, then what percentage of students get A grade? (10 Marks)
- d) What percentage of students get a score between 67 and 78? (15 Marks)

(Z score = -2.4 is 0.4918, Z score = 1 is 0.3413, Z score = 3 is 0.4987, Z score = 2.4 is 0.4918, Z score = -0.6 is 0.2257 and Z score = 1.6 is 0.6709).

Draw the diagram for each calculation.

19.09.2020
