UNIVERSITY OF COLOMBO
FACULTY OF GRADUATE STUDIES

Final Examination in Post Graduate Diploma in Labor Relations and Human Resources Management - 2020

PgDLRHRmgt-5104 Statistical Analysis

Three (03) Hours

Answer five (05) questions only

Use of Calculators is allowed

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1. i.   How do you use statistical analysis in your business?

    (06 Marks)

    ii.   Analytical techniques will depend on types of data. Describe the statement.

    (10 Marks)

    iii. What are the methods of data collection?

    (04 Marks)

    (**Total 20 marks)**

2. i.   Explain the internal and external sources of data.

    (06 Marks)

    ii.   Why samples are important in statistical analysis?

    (04 Marks)

    iii. Briefly describe "Dichotomous" and "Multi-Option questions"

    (04 Marks)

    iv.   What are the important factors to prepare a questionnaire?

    (06 Marks)

    (**Total 20 marks)**

3. i. Management of a biscuits manufacturing company expects to recruit the most qualified person to the HRM division out of two candidates who have applied for the post. A question paper that comprises Human Resource Management (HRM), Statistics and Organizational behavior (OB) has been distributed to the candidates and they have scored the following marks.

Candidates	Amal	Bimal
HRM	80	90
Statistics	70	55
OB	90	95

According to the subjects' importance, they have been weighted as 4:3:2. Select the most qualified person to the HRM division.

(08 Marks)

ii. There are two types of machines used in the manufacturing process. They have been categorized as "A" and "B". Manufacturing speed of a machine in "A" category is 30 items per minute and "B" category is 20 items per minute. Calculate the average manufacturing speed of the machines in two categories.

(06 Marks)

iii. A reputed organization has been registered in stock market and the stock price in the last five months are respectively Rs.20, Rs.15, Rs.22, Rs.21 and Rs.25. Calculate the average stock price using geometric mean.
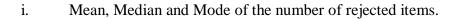
(06 Marks)

(Total 20 marks)

4. Number of rejected items from the production line during the last 40 days has been provided in the following frequency Distribution.

Number of rejected items	Number of days
30-39	05
40-49	09
50-59	13
60-69	06
70-79	04
80-89	03
	40

You are requested to calculate.

i. Mean, Median and Mode of the number of rejected items.

(12 Marks)

ii. Variance and Standard deviation of the number of rejected items.

(06 Marks)

iii. Coefficient of variance of the number of rejected items.

(02 Marks)

(Total 20 marks)

5. i. How can you use correlation analysis in decisions making?

(02 Marks)

ii. Following table provides information for price of a product and profit of a company for a period of 5 years.

Price of product (Rs.)	Profit in thousands
20	40
10	60
12	50
10	50
15	40

a. Construct a Regression Model to represent the given data.

(10 Marks)

b. What will be the expected profit if the price is Rs.8?

(02 Marks)

c. Calculate and interpret the coefficient of correlation between price and profit

(06 Marks)

(Total 20 marks)

6. i. What is the Law of Statistical Regularity?

(04 Marks)

. ii. What is meant by Statistic and Parameters used in estimation?

(04 Marks)

. iii. The management of the HRM department needs to estimate the number of employees who are absent to work in average. Selecting a sample size of 50 employees, the study was carried out. According to the findings, 12.5 employees in average is absent with a

standard deviation of 3.2 employees. Estimate the average number of absent employees at 95% confidence.

(06 Marks)

iv. A producer says that the average weight of his product is 70kg. When a sample size of 100 is tested the average weight is 67kg with a standard deviation of 3.4kg. Test the statement of the producer at 95% confidence.

(06 Marks)

(Total 20 marks)

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