

QP CODE: 24900018



Reg No:.....

Name:.....

MAHATMA GANDHI UNIVERSITY, KOTTAYAM

FIRST SEMESTER MGU-UGP (HONOURS)

REGULAR EXAMINATION NOVEMBER 2024

First Semester

Core Course - MG1CCRBBA102

BUSINESS STATISTICS AND LOGIC

(2024 ADMISSION ONWARDS)

Duration: 2 Hours

Maximum Marks: 70

**Remember (K), Understand (U), Apply (A), Analyse (An), Evaluate (E), Create (C), Interest (I),
Appreciation (Ap), and Skill (S)**

*Students should attempt atleast one question from each course outcome to enhance their overall
outcome attainability.*

[Learning Domain][CO No(s)]

Part A

Short Answer Type Questions.
Answer any 5 out of 8 questions.
Each question carries 2 marks

1	What is a frequency polygon?	[K]	[1, 2]
2	Which average is suitable in the case of open end distributions? Why?	[U]	[1]
3	For a moderately skewed distribution, Mode and Median are respectively 65 and 68. Find Mean	[A]	[4]
4	What are the different types of measures of dispersion?	[K]	[1]
5	Define correlation. What does it signify in the context of statistical analysis?	[U]	[5]
6	Define probable error. If the coefficient of correlation between two variables is less than its probable error, how will interpret it in a business context.	[U]	[5]
7	A call center receives an average of 12 calls per hour. What type of distribution would be appropriate to model the probability of receiving exactly 15 calls in the next hour?	[A]	[3]
8	If the code for "WATER" is "XBSFS," what is the code for "FIRE"?	[An]	[2]

(5 × 2 = 10)

Part B

Short Essay Type Questions
 Answer any 4 out of 6 questions.
 Each question carries 5 marks.

9	What is classification? What are the different types of classification?	[K]	[1, 2]
10	Differentiate between a bar graph and a histogram. Provide examples of situations where each would be more suitable.	[U]	[1, 2]
11	Department M has a mean salary of \$50,000 with 25 employees, while Department N has a mean salary of \$60,000 with 15 employees. What is the combined mean salary for both departments?	[A]	[3, 4]
12	An article manufactured by a company consists of two parts A and B. In the process of manufacture of Part A, 9 out of 100 are likely to be defective. Similarly, 5 out of 100 are likely to be defective in the process of manufacture of part B. Calculate the probability that the assembled part will not be defective.	[A]	[3]
13	Explain how to calculate range when the given data is continuous. Also find range and coefficient of range of the following series. Marks 20 - 30 30 - 40 40 - 50 50 - 60 60 - 70 No: of students 8 12 20 7 3	[A]	[4]
14	A candidate obtained the following percentage of marks. English: 60, Hindi: 75, Mathematics: 63, Physics: 60, Chemistry: 55. Find the weighted mean if weights are 1,1,2,3,3 respectively allotted to subjects.	[A]	[4]

(4 × 5 = 20)

Part C

Essay Type Questions
 Answer any 2 out of 4 questions.
 Each question carries 20 marks.

15	Demonstrate the process of calculating the median in each of the following cases: 1) Raw data, 2) Ungrouped data, and 3) Grouped data. Provide an example for each scenario to illustrate the steps involved.	[A]	[1, 2]
16	Find mean deviation about the arithmetic mean for the following frequency distribution of marks of 60 college students. Marks: 0 - 10 10 - 20 20 - 30 30 - 40 40 - 50 50 - 60 60 - 70 Frequency : 4 6 10 20 10 6 4	[A]	[4]
17	a) What is the role of the standard error in regression analysis? b) What are the key limitations associated with regression analysis?	[K]	[5]
18	From the following data, obtain the two regression equations Sales : 91 97 108 121 67 124 51 73 111 57 Purchases: 71 75 69 97 70 91 39 61 80 47	[A]	[5]

(2 × 20 = 40)

END OF THE QUESTION PAPER
