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(2104)

BBA (CBCS) RUSA Ist Semester Examination

4074

STATISTICS FOR BUSINESS DECISIONS

(Core Course)

Paper : BBA–103

Time : 3 Hours]   [Maximum Marks : 70

Note :– Attempt *five* questions in all. Select *one* question each from Parts–B, C, D and E. Part–A is compulsory.

Part–A

(Compulsory Question)

1. Attempt all the multiple choice questions :

   (i)   The standard deviation for two observations is :

   (a)   Square of their difference

   (b)   Half of their absolute difference

   (c)   Their absolute difference

   (d)   Twice of their absolute difference

(ii) The mean of a distribution is 14 and the standard deviation is 5. What is the value of the coefficient of variation ?

(a) 60.4%   (b) 48.3%

(c) 35.7%   (d) 27.8%

(iii) The specific statistical methods that can be used to summarize or to describe a collection of data is called :

(a) Descriptive statistics

(b) Inferential statistics

(c) Analytical statistics

(d) All of these

(iv) Probability sampling is otherwise called :

(a) Multiple choices

(b) Uni-variate analysis

(c) Random sampling

(d) Bi-variate analysis

(v) Hypothesis refers to :

(a) The outcome of an experiment

(b) A conclusion drawn from an experiment

(c) A form of bias in which the subject tries to outguess the experimenter

(d) A tentative statement about the relationship

CS-2

(2)

(vi) Mean, Median and Mode are :

(a) Measures of deviation

(b) Ways of sampling

(c) Measures of control tendency

(d) None of these

(vii) Testing hypothesis is a :

(a) Inferential statistics (b) Descriptive statistics

(c) Data preparation (d) Data analysis

(viii) If the quartile range is 24, then the quartile deviation is :

(a) 48 (b) 12

(c) 24 (d) 72

(ix) In the regression equation $Y = a + bX$, b is called :

(a) Slope

(b) Regression coefficient

(c) Intercept

(d) Both (a) and (b)

(x) In a throw of coin what is the probability of getting head ?

(a) 1 (b) 2

(c) ½ (d) 0 [1½×10=15]

CS–2 (3) Turn Over

2. Short answer type questions. Attempt any *five* parts. Each part carries 3 marks :

(i) What is Skewness ? How is it calculated ?

(ii) What do you mean by absolute and relative measure of dispersion ?

(iii) Discuss the use of statistics in modern business.

(iv) What is rank correlation ? What are its uses ?

(v) What is a measure of dispersion ? In your opinion which is the best method of finding out dispersion and why ?

(vi) What is index numbers ? Explain its significance.

(vii) Define regression lines and regression coefficients.

(viii) Find out mode, first quartile and third quartile from the following series :

Age (Years)	Frequency (F)
0—20	4
20—40	10
40—60	15
60—80	20
80—100	11

[3×5=15]

3. The frequency table of the monthly salaries of 20 people is shown below :

Salary (in ₹)	Frequency
3500	5
4000	8
4200	5
4300	2

(a) Calculate the mean of the salaries of the 20 people.

(b) Calculate the standard deviation of the salaries of the 20 people.

(c) Calculate Variance.

(d) Calculate coefficient of variation.

(e) Highlight the properties of good average.

Or

4. The following data shows daily wages of 199 workers of a factory. Find out inter quartile range, Quartile Deviation and the coefficient of Quartile Deviation :

Wages	No. of Workers
10	2
20	8
30	20

40	35
50	42
60	20
70	28
80	26
90	16
100	2

Part–C [10 each]

5. Calculate the Karl Pearson's coefficient of correlation from the following series of marks secured by 10 students in a class test of Economics and Mathematics :

Marks of Economics	Marks of Mathematics
54	62
80	92
42	32
70	85
65	68
85	95
54	66
70	84
35	40
60	78

6. Following are the data of heights of fathers and their sons. Find out the regression equations from them.

(Note : Height is in inches)

Height of fathers (X)	Height of sons (Y)
62	63
64	62
66	65
67	67
68	67
69	70
71	70
73	68
73	71

Part–D   [10 each]

7. What is the meaning and significance of time series ? With the help of example discuss about method of least squares.

Or

8. Construct Fishers Ideal Index from the following :

Articles	Base Year		Current Year	
	Price per unit	Expenditure	Quantity	Expenditure
A	40	240	7	210
B	4	16	8 ,	40
C	45	180	5	250
D	5	25	6	60

Also explain about time reversal and factor reversal test.

<center>Part–E</center>   [10 each]

9. What do you understand by probability distribution ? Explain Normal and Poisson distribution. Also calculate, a coin is thrown 3 times. What is the probability that at least one head is obtained ?

Or

10. What is hypothesis testing ? Explain the process of testing hypothesis with the help of z-test and t-test.