

BACHELOR OF COMPUTER APPLICATIONS (C.B.C.S.) (2014 COURSE)

B.C.A. Sem-IV : WINTER : 2021

SUBJECT: STATISTICS

Day : Wednesday
Date : 19-01-2022

W-11046-2021

Time : 02:00 PM-05:00 PM
Max. Marks: 100

N.B.:

- 1) Attempt any **FOUR** questions from Section –I and any **TWO** questions from Section –II.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.
- 4) Use of non-programmable **CALCULATOR** is allowed.
- 5) Graph should be drawn on **GRAPH PAPERS** only.

SECTION-I

Q.1 Describe term statistics with the help of : (15)
i) Definition ii) Scope iii) Limitations

Q.2 a) Justify “Data collection by primary data sources are more reliable than (07)
secondary data sources”.

b) Calculate Mean and Median for the following data: (08)

Classes (X)	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80
Frequency (f)	3	6	4	7	12	27	24	07

Q.3 a) Differentiate Correlation Vs Regression Analysis. (07)

b) Represent the following data by simple bar diagram. (08)

Year	1961	1966	1971	1975	1976
GRT (in 000)	901	1792	2500	4464	5115

Q.4 Construct Frequency Polygon with reference to the Histogram for the following (15)
data:

Classes	10-15	15-20	20-25	25-30	30-40	40-60
Frequency	7	19	27	15	12	12

Q.5 From the data given find σ_x , σ_y and decide which Batsman is more consistent. (15)

Batsman A	35	54	52	53	56	52	51	49
Batsman B	108	107	105	106	104	103	104	101

Q.6 a) Write a brief note on properties of Regression Coefficient. (08)

b) Prepare suitable frequency distribution table for the data provided below: (07)
15, 20, 22, 24, 27, 25, 15, 19, 26, 30, 10, 15, 20, 23, 26, 27, 30, 22, 26, 18, 15,
17, 21, 11, 22, 26, 27, 29, 21, 18.

P. T. O.

Q.7 Write short notes on any **THREE** of the following: (15)

- a) Components of time series
- b) Pie- diagram
- c) Cumulative frequency distribution
- d) Absolute measures of dispersion

SECTION - II

Q.8 From the following data, obtain the two Regression Equations and two (20)
Regression Coefficient.

Demand	101	97	108	121	67	124	51	73
Supply	71	75	09	97	70	91	39	61

Q.9 Calculate Spearman's coefficient of rank correlation for the following scores (20)
in Psychological tests (x) and Arithmetical ability (y) of ten children.

Child	A	B	C	D	E	F	G	H	I	J
X:	105	104	102	101	100	99	98	96	93	92
Y:	101	103	100	98	95	96	104	92	97	94

Q.10 Estimate below mentioned statistical instruments $\bar{x}, \bar{y}, Cov(x, y)$, coefficient (20)
of standard deviation for x and y.

Marks in I st year	25	28	35	31	36	29	38
Marks in II nd year	43	46	49	36	32	31	30

* * * *