



Sanjay Ghodawat University, Kolhapur

2017-18

Established as State Private University under Govt. of Maharashtra. Act No XL, 2017

2018 FY BBA

School of Commerce and Management

Management

MBC 104

Quantitative Techniques for Management

Semester – Even (II)

May 2018

End Semester Examination

Time: 3 hrs, Max Marks: 100

24th May 2018

Instructions:

1) All Questions are compulsory.

10:30 AM To 1:30 PM

		Marks	COs
Q.1	Solve the following		
a)	State whether True & False (any 5)	10	
	1. There is a difference between bar chart and histogram		CO104.1
	2. Graph is not a Line diagram		CO104.1
	3. Range of set of observation is the difference between largest and smallest of observations		CO104.2
	4. Dispersion measures the scatteredness of set of observations		CO104.2
	5. The value of correlation lies between -1 to +1		CO104.3
	6. Bivariate data is data collected for more than two variables		CO104.3
b)	Answer the short questions (any 5)	10	CO104.3
	1. Scatter diagram		CO104.3
	2. Types of correlation		CO104.4
	3. Index number		CO104.1
	4. Merits of mean		CO104.4
	5. Components of time series		CO104.4
	6. Standard deviation definition		CO104.2
Q.2	Solve/answer any Two		
a)	Define statistics and explain application statistics	10	CO104.1
b)	Draw a blank table to show the number of candidates gender wise appearing in pre university, first year, second year, third year examination of a university in the faculties of commerce, arts and science in a certain year. Make suitable assumptions	10	CO104.1

- c) The data on fund flow (Rs in crore) of an International Airport Authority during financial years 2011-12 to 2013-14 are given below. Represent this data by suitable BAR chart

10 CO104.1

	2011-12	2012-13	2013-14
Non Traffic revenue	40.00	50.75	70.25
Traffic revenue	70.25	80.75	110.00
Expenditure	70.00	90.00	100.00
Profit before Tax	40.15	50.50	80.20

Q.3 Solve/answer any Two

- a) What is the mean and median for the following data

10 CO104.2

Marks	0-10	10-20	20-30	30-40	40-50
No. of Students	5	13	23	27	30

- b) Calculate the Quartile deviation for the following data

10 CO104.2

Class Interval	30-40	40-50	50-60	60-70	70-80	80-90	90-100
Frequency	4	6	8	12	9	7	4

- c) Calculate standard deviation for average life of a particular band of T.V. sets

10 CO104.2

Life in years	0-2	2-4	4-6	6-8	8-10	10-12
Number of sets	5	16	13	7	5	4

Q.4 Solve/answer any Two

- a) Obtain the regression equation of wages on length of services

10 CO104.3

Length of service (in Yrs)	11	7	9	5	8	6	10	12	3	4
Yearly wages (in Rs '000)	14	11	10	9	13	10	14	16	6	7

b)

10 CO104.3

The data on aptitude score and productivity index of six workers in a factory are given below. Calculate co-efficient of correlation

Workers	A	B	C	D	E	F
Aptitude Score(X)	9	18	18	20	20	23

c) Find out spearman's coefficient of correlation between the two kinds of assessment of postgraduate students performance in a college.

10 CO104.3

Name of students	A	B	C	D	E	F	G	H	I
Internal Assessment	51	63	73	46	50	60	47	36	60
External Assessment	49	72	74	44	58	66	50	30	35

Q.5

Solve/answer the following

a) Calculate price index number for the year 1996 with 1986 as base year from the following data i) Laspeyres index ii) Passche index iii) Fishers index

10 CO104.4

Commodity	1986		1996	
	Price (Rs)	Value (Rs)	Qty Consumed	Value (Rs)
A	10	1500	160	1760
B	12	1080	100	1300
C	15	900	60	960
D	9	450	40	480

- b) Calculate five years moving average and draw a graph to represent the moving average

10

CO10

Year	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
No. of student	332	317	357	392	402	405	410	427	405	438

4/4