



Sanjay Ghodawat University, Kolhapur

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FY BBA

School of Commerce & Management

MBC 104

Quantitative techniques for management

II Sem

Dec2018

24 NOV 2018

Examination: End Semester Exam, Max Marks: 100, Time 3 Hrs

10:00 am to 1:00 pm

Instructions:

1) All Questions are compulsory.

Q.1	Solve the following	Marks	COs
a)	State whether True & False (any 5)	10	
	1. The Index number is special type of average		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 concentration of set of observations.		CO104.3
	5. The correlation between shoe size and intelligence is zero.		CO104.4
	6. Bi-variate data is data collected for two variables.		CO104.4
b)	Answer the short questions (any 5)		
	1. Scatter diagram	10	CO104.1
	2. Positive correlation		CO104.1
	3. Fisher Index number		CO104.2
	4. Demerits of mean		CO104.3
	5. Components of time series		CO104.4
	6. Standard deviation definition		CO104.4

Q.2 Solve/answer any Two

- a) The following data represents the number of accidents in India during the period 2015 -2018.

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CO104.1

Country	Number of tourist arrived		
	2015-16	2016-17	2017-18
Maharashtra	4110	4340	4245
Madhya Pradesh	7393	8245	8384
Karnataka	3114	3045	3097
Tamilnadu	4432	3849	4249
Bihar	7492	7492	7990

Construct a histogram and pie chart for the data.

b)

- 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

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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

- c) Define statistics and explain application statistics

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CO104.1

Q.3 Solve/answer any Two

- a) Calculate the Mean and mode for the following data

X	3	4	5	6	7	8	9	10	11
F	13	90	81	117	66	27	6	2	2

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CO104.2

- b) Compute the mean deviation about the median and corresponding coefficient for the following data
82, 56, 75, 70, 52, 80, 68

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CO104.2

- c) From the following data calculate S.D. and C.V.

Marks in Statistics : 40,48,50,53,58,60,66,70,72,73

10 CO104.2

Q.4 Solve/answer any Two

- a) On the basis of the following information determine regression of Y on X
 $\Sigma X = 666$ $\Sigma Y = 663$ $\Sigma X^2 = 44490$ $\Sigma Y^2 = 44061$ $\Sigma XY = 44224$ $N = 10$

10 CO104.3

- b) . Calculate co-efficient of correlation from the following Information

X	2	3	5	5	6	8
Y	9	8	8	6	5	3

10 CO104.3

- c) Compute rank correlation from the following data relating to ranks given by two judges in a contest

10 CO104.3

Serial No. of candidate	1	2	3	4	5	6	7	8	9	10
Rank by Judge A	10	5	6	1	2	3	4	7	8	9
Rank by Judge B	5	6	9	2	8	7	3	4	10	1

Q.5 Solve/answer the following

- a) Compute Fishers index from the following data

10 CO104.4

Commodities	Base year		Current Year	
	Price	Quantity	Price	Quantity
A	4	3	6	2
B	5	4	6	4
C	7	2	9	2
D	2	3	1	5

- b) Calculate 3 years moving average and draw a graph to represent the moving average 10

CO104.4

Year	1	2	3	4	5	6	7	8	9	10
Sales in Lakhs	4	7	10	12	10	15	20	22	23	22
