



**II Semester B.Com. Examination, May 2011**  
**(Semester Scheme)**  
**COMMERCE**  
**Business Statistics**

Time : 3 Hours

Max. Marks : 90

*Instruction : Answers should be written fully in English or in Kannada.*

SECTION – A

Answer **any ten** sub questions from the following. **Each** sub-question carries **2** marks. (2×10=20)

1. a) Define the term statistics singularly.
- b) Mention the types of averages.
- c) What is rank correlation ?
- d) Why Fishers index is called ideal ?
- e) List any four methods of studying variation.
- f) If  $Z = 90$ , median = 40, find  $\bar{X}$ .
- g) If variance = 36,  $\sum X = 150$ ,  $N = 10$ , find C.V.
- h) If  $r = 0.6$  and  $N = 64$ , find probable error.
- i) What is nonsense correlation ?
- j) Mention the methods of calculating consumer price index numbers.
- k) How range is calculated ?
- l) Average weight of 3 students is 60 kgs. The weight of first two students is 50 kg. and 60 kg. respectively. Find the third student weight.



P.T.O.



## SECTION - B

Answer **any 5** questions. **Each** question carries **5** marks.

(5×5=25)

2. Find mode by grouping and analysis table

<b>Marks</b>	20	30	40	50	60	70	80	90
<b>Students</b>	40	50	70	90	85	91	89	65

3. Calculate S.D. from the following :

<b>Central size</b>	15	25	35	45	55	65	75	85
<b>Frequency</b>	18	22	30	50	45	30	20	15

4. Find the class intervals if  $\bar{X}$  is found to be 35.84 and assumed mean 35.

<b>Step Deviation</b>	-3	-2	-1	0	+1	+2	+3
<b>Frequency</b>	2	12	19	29	20	13	5

5. If  $\bar{X}$  is found to be 44.5 find the missing frequency

<b>Weight in kgs.</b>	10	20	30	40	50	60	70
<b>No. of Students</b>	15	20	25	-	40	50	20





6. Calculate correlation co-efficient between density of population and death rate

<b>Density of Population</b>	200	500	400	700	600	300
<b>Death Rate</b>	10	16	14	20	17	13

7. Calculate cost of living index numbered from the following data.

<b>Items</b>	<b>Index</b>	<b>Weights</b>
Food	323.79	50.0
Clothing	310.00	10.0
Lighting	220.00	8.0
Rent	150.00	12.0
Miscellaneous	300.00	20.0

8. From the following data :

- a) Calculate the regression equation X on Y.
- b) Estimate the value of X when Y = 40.

<b>X</b>	20	24	26	34	36
<b>Y</b>	10	12	14	18	26

9. Average rainfall at Gowribidanur from Monday to Saturday is 3 cm. Due to heavy rainfall on Sunday the average for the week increased to 5 cm. What was the rainfall on Sunday ?



## SECTION - C

Answer **any three** questions from this Section. **Each** question carries **15** marks.

(3×15=45)

10. Ten competitors in a "Summer Fall Design Show" Gowribidanur are ranked by three Judges. Using rank correlation find out which pair of Judges have the nearest approach to the common taste in fashion design.

<b>Judge A</b>	1	3	2	5	8	7	9	4	10	6
<b>Judge B</b>	3	5	4	6	7	9	8	1	2	10
<b>Judge C</b>	5	6	2	3	8	7	10	4	1	9

11. Wages of 100 workers are given below. If median is found to be 33, find the missing frequencies.

<b>Wages (in ₹)</b>	0-10	10-20	20-30	30-40	40-50	50-60	60-70
<b>No. of Workers</b>	12	15	-	20	-	10	10

12. Compute Fishers Ideal Index and show that it satisfies the reversability tests.

<b>Items</b>	<b>Base year</b>		<b>Current year</b>	
	<b>Value</b>	<b>Quantity</b>	<b>Value</b>	<b>Quantity</b>
<b>A</b>	300	150	480	4
<b>B</b>	50	10	90	6
<b>C</b>	48	12	50	5
<b>D</b>	120	60	100	2
<b>E</b>	60	20	105	3.5





13. Find from the following the most consistent Batsman and better run getter

<b>Batsman A</b>	5	7	16	27	39	53	56	61	80	101	105
<b>Batsman B</b>	0	4	16	21	41	43	57	78	83	90	95

14. Find the value of mean, median and mode from the following :

<b>Weight in kgs</b>	71-75	76-80	81-85	86-90	91-95	96-100	101-105	106-110	111-115
<b>No. of students</b>	3	10	15	18	25	19	14	9	2

ಕನ್ನಡ ಭಾಷಾಂತರ

ವಿಭಾಗ - ಎ

ಈ ಕೆಳಗಿನ ಯಾವುದಾದರೂ 10 ಉಪ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ. ಪ್ರತಿ ಉಪ ಪ್ರಶ್ನೆಗೆ 2 ಅಂಕಗಳು.

(2×10=20)

- ಏಕ ವಚನಾರ್ಥದಲ್ಲಿ ಸಂಖ್ಯಾಶಾಸ್ತ್ರವನ್ನು ವ್ಯಾಖ್ಯಿಸಿ.
- ವಿವಿಧ ಸರಾಸರಿಗಳನ್ನು ನಮೂದಿಸಿ.
- ಸಹ ಸಂಬಂಧ ಎಂದರೇನು ?
- ಫಿಷರನ ಸೂಚ್ಯಂಕವನ್ನು ಆದರ್ಶ ಎಂದು ಏಕೆ ಕರೆಯುತ್ತೇವೆ ?
- ವಿಚಲತೆಯನ್ನು ಅಧ್ಯಯನ ಮಾಡುವ 4 ಬಗೆಗಳನ್ನು ತಿಳಿಸಿ.
- $Z = 90$ , ಮಧ್ಯಕವು = 40 ಇದ್ದಲ್ಲಿ  $\bar{X}$  ನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.
- ಭಿನ್ನತೆ = 36,  $\sum X = 150$ ,  $N = 10$  ಇದ್ದಲ್ಲಿ, ಭಿನ್ನತೆಯ ಸಹಗುಣಕವನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.
- ಸಹಸಂಬಂಧ = 0.6,  $N = 64$  ಇದ್ದಲ್ಲಿ ಸಂಭವನೀಯ ತಪ್ಪನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.
- ಅಸಂಬಂಧ ಸಹಸಂಬಂಧ ಎಂದರೇನು ?
- ಜೀವನ ವೆಚ್ಚ ಸೂಚ್ಯಂಕವನ್ನು ಕಂಡುಹಿಡಿಯುವ ವಿಧಾನಗಳನ್ನು ತಿಳಿಸಿ.
- ಅಂತರವನ್ನು ಹೇಗೆ ಲೆಕ್ಕಿಸುತ್ತೀರಿ ?
- ಮೂವರು ವಿದ್ಯಾರ್ಥಿಗಳ ಸರಾಸರಿ ತೂಕ 60 ಕೆಜಿ. ಮೊದಲೆರಡು ವಿದ್ಯಾರ್ಥಿಗಳ ತೂಕ ಕ್ರಮವಾಗಿ 50 ಕೆಜಿ. ಮತ್ತು 60 ಕೆಜಿ. ಯಷ್ಟಿದೆ. ಮೂರನೆಯ ವಿದ್ಯಾರ್ಥಿಯ ತೂಕವನ್ನು ಕಂಡುಹಿಡಿಯಿರಿ.