

FYBA sem - II
stats practical,

14/3/15

No 3 AGD

Time: 1 $\frac{1}{2}$ Hr

Marks:40

Note:

1. All questions are compulsory.
2. Attempt any two sub questions from each question
3. Figure to right indicates marks.
4. Use of calculator is allowed.

Q1. Attempt any 2 from the following

1. For the following data representing the distribution of monthly salary of 100 employees calculate mean deviation from mode (5)

Salary (Rs)	No of employees
300-400	12
400-500	16
500-600	32
600-700	18
700-800	13
800-900	9

2. For the following data compute (5)
(i) Quartile deviation
(ii) Coefficient of quartile deviation

Weight	30-34	35-39	40-44	45-49	50-54	55-59	60-64
No of workers	3	5	12	18	14	6	2

3. Calculate Bowley coefficient of skewness for the following age distribution of blood donars at a particular hospital (5)

Age	10-20	20-30	30-40	40-50	50-60	60-70	70-80
No of Donars	1	20	69	108	78	22	2

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Q2 Attempt any 2 from the following

1. Calculate Karl Pearson's coefficient of correlation for following data (5)

X	42	44	58	89	98	66
Y	56	49	53	65	76	58

2. For the following set of data calculate spearman's rank correlation coefficient (5)

X	60	40	34	29	29	34	50	54
Y	40	28	32	65	58	55	40	35

3. For a certain data $n = 10$ $\sum x = 200$ $\sum y = 2200$ $\sum xy = 45800$ $\sum x^2 = 4900$ $\sum y^2 = 490400$ calculate r and obtain regression equation of x on y and y on x also estimate value of y when $x=30$ and value of x when $y=500$ (5)

Q3. Attempt any 2 from the following

1. For the following data calculate Index Number by (i) Unweighted aggregative method (ii) Weighted aggregative method (iii) Unweighted average of price relatives (iv) Weighted average of price relatives (5)

Commodity	Price in Rs		Weight
	Base Year	Current Year	
A	550	1345	130
B	630	1250	450
C	150	335	75
D	450	778	225
E	225	886	120

2. From the following data calculate Laspeyre's, Paasche's, Fisher, Dorbisch - Bowley's, Marshall-Adgeworth's index number (5)

commodity	Base year		Current year	
	price	quantity	price	quantity
A	4	15	5	20
B	8	20	12	30
C	6	25	8	20
D	6	3	8	4
E	14	2	20	3

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3. From following chain base index number prepare fixed base index number (5)

Year	2000	2001	2002	2003	2004
Index no	110	120	125	121	115

Q4 Attempt any 2 from the following

1. The following data refer to the weight distribution of 100 student in a class (5)

	No.	Mean Wt. (in kg)	S.D of Wt. (in kg.)
Boys	55	61	8
Girls	45	51	6

Find combined mean and combined standard deviation

2. The regression equation of y on x for bivariate data is $5y+3x=42$ and The regression equation of x on y is $2x+y=30$ find r and most probable value of x on when $y=12$ (5)
3. Construct cost of living index number with the help of the data given below (5)

Item	Weights	Index Number
Food	35	221
Fuel and lighting	14	198
clothing	15	190
Rent	8	183
Miscellaneous	20	161