

FYBA

Statistics - I
(Practical)

12/10/15

OP10AGM

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.
5. Graph paper will be provided on request.

- Q1 1. Construct a frequency table for the following data regarding annual profit in thousand of Rs. In 50 firms taking 25-35, 35-45, etc. as class intervals. Also find relative frequency and % frequency (5)

28.1 35.3 61.5 29.9 36.2 48.6 57.5
67.2 69.6 50.0 48.4 40.0 47.2 42.9
41.6 37.5 51.6 62.5 63.9 33.6 31.6
32.6 32.4 35.3 40.5 33.6 37.2 60.1
51.2 54.3 56.4 37.1 46.2 42.8 38.1
61.2 59.5 58.1 44.5 30.2 57.9 38.5
44.1 45.3 47.7 38.6 44.2 47.4 47.8
64.2

2. Find the remaining class frequencies (5)
N=1000 (A)=600 (B)=500 (C)=400 (AB)=300 (AC)=250
(BC)=150 (ABC)=100

3. Tabulate the information : (5)
Out of 200 students consisting 60% boys 60 wear glasses and 150 passed in the test out of boys 80 passed the test including 30 wearing glasses. An all 40 boys wear glasses and among students wearing glasses 48 passed.

- Q2 1. Draw frequency curve, frequency polygon and histogram for the following data (5)

Class	20-30	30-40	40-50	50-60	60-70	70-80
Frequency	4	20	38	24	10	4

2. Draw a multiple bar diagram to represent the following data relating to the index of industrial production in U.S.A and West Germany for the year 1956-1959 (5)

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Year	Index of Industrial production	
	U.S.A	West Germany
1956	109	139
1957	110	147
1958	102	152
1959	116	162

3. Draw an ogive (less than and greater than) from the following (5) distribution

Monthly wages (in Rs)	50-55	55-60	60-65	65-70	70-75	75-80	80-85
Number of workers	5	10	22	30	16	12	15

- Q3 1. Calculate Mean and median for the following data. (5)

Class-interval :	0-10	10-20	20-30	30-40	40-50	50-60
Frequency :	12	18	27	20	17	6

2. Represent the following data by means of histogram and from it (5) obtain the value of mode.

Weekly wages (in Rs.) :	10-15	15-20	20-25	25-30	30-35	35-40	40-45
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No. of workers :	7	9	27	13	12	12	8
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3. For the following data, find eighth deciles and sixty seventh (5) Percentile.

Time (in Minutes) :	10-15	15-20	20-25	25-30	30-35	35-40	40-45
No. of workers :	8	14	18	25	15	14	6

- Q4 1. The following data give the points scored in a tennis match by the (5) two players As (x,y) at the end of 20 games

(10,12)	(12,11)	(7,9)	(15,19)	(17,21)	(12,8)	(16,10)
(14,14)	(22,18)	(16,14)	(15,16)	(22,20)	(19,15)	(7,18)
(11,11)	(12,18)	(10,10)	(5,13)	(11,7)	(10,10)	

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Taking class-intervals as 5-9, 10-14, 15-19, etc. for both x and y construct :

- (i) Bivariate frequency table
- (ii) Marginal frequency tables for x and y
- (iii) Conditional frequency distribution for y given $x \geq 15$.

2. Explain subdivided Bar diagram. (5)

Represent the following data by a subdivided bar diagram. The data represents figures of production of paper in thousand tones for the years 2005, 2006, 2007.

Types	2005	2006	2007
Printing and Writing	35	40	50
Wrapping	18	19	15
Boards	16	15	15
Special varieties	7	5	5
Total	76	79	85

3. Calculate quartiles for the following data (5)

Wages : 200-250 250-300 300-350 350-400 400-450 450-500

No. of

Workers: 11 13 27 25 18 6