



Winter Vacation Home Assignment-2071

Subject: Business Statistics

Level: BBS I

Shift: Morning

Set – A

Attempt all questions.

1. The expenditures of 6 families in rupees are given below.

Family	A	B	C	D	E	F
Expenditure (in Rs.)	300	325	375	400	425	500

Calculate the average expenditure by

- Direct method
- Short-cut method

[Ans. A. Rs.387 b. Rs.387.5]

2. Find the arithmetic mean of the marks of 10 students of a class from the following information:

Roll No.	1	2	3	4	5	6	7	8	9	10
Marks	75	45	70	36	38	31	35	28	30	33

[Ans. 42.1 marks]

3. The mean of Mr. A's marks on five tests was 77.4. The marks on the first 4 of these tests were 88, 77, 70 and 72. Find the marks on fifth test.

[Ans. 80 marks]

4. The mean weight of a student in a certain group of students is 60 kgs. The individual weights of five of them are 50, 55, 64, 58 and 68 kgs. What is the weight of the sixth student?

[Ans. 71 kgs.]

5. Compute mean from the following data by

- Direct method
- Short-cut method
- Step-deviation method

X	15	20	30	80	50
F	6	12	11	6	5

[Ans.34.75]

6. Given that the A.M. is equal to 7.3. Find the missing frequency in the following data.

X	5	6	7	8	9
F	4	6	12	?	8

[Ans. 10]

7. Six types of workers are employed in each of two workshops but at different rates of wages as follows:

Types of workers	Workshop A		Workshop B	
	Rate of wages per worker (Rs.)	No. of workers	Rate of wages per worker (Rs.)	No. of workers
Machine	2.50	2	3.00	18
Filter	3.50	14	3.00	50
Electrician	4.00	20	4.25	8
Carpenter	3.00	7	3.50	12
Smith	3.00	6	3.50	10
Clerk	2.00	1	5.00	2

In which of the two workshops is the average rate of wages per worker higher and by how much?

[Ans. $\bar{X}_A = Rs. 3.5$, $\bar{X}_B = Rs. 3.25$, In A by 25 Paise.]

8. Find the arithmetic mean from the following data:

Expenditure (Rs.)	Above 0	Above 100	Above 200	Above 300	Above 400	Above 500	Above 600
No. of persons	150	130	100	50	30	12	0

[Ans. Rs.264.67]

9. An association doing charity work decided to give old age pension to people over 60 years of age. The scales of pay were fixed as follows:

Age group (in year)	60-65	65-70	70-75	75-80	80-85
Pension per month (in 00 Rs)	25	30	35	40	45

The age of 25 persons who secured pension rights are given below:
74, 62, 84, 72, 61, 83, 72, 81, 64, 71, 63, 61, 67, 60, 67, 74, 66, 64, 79, 73,
75, 76, 69, 68, 78.

Calculate monthly average pension payable.

[Ans.Rs.3320]

10. From the information given below, find
- Which factory pays larger amount as daily wage?
 - What is the average daily wage for the workers of two factories?

	Factory A	Factory B
No. of wage earners	250	200
Average daily wage (in 00 Rs.)	12	13.8

[Ans. i. Factory A ii. Rs 1280]

11. A contractor employs three types of workers male, female and children. To a male worker, he pays Rs.1600 per day, to a female worker Rs.1300 per day and to child worker Rs.1000 per day. What is the average wage per day paid by the contractor if the no. of males and females and children is 20, 15 and 5 respectively?

[Ans. Rs.1431]

12. The mean age of a combined group of men and women is 30 years. If the mean age of the men is 32 years and that of the women is 27 years. Find out the percentage of the men and women in the group.

[%of men = 60% , %of women = 40%]

13. The following is the income distribution of 80 families.

Income (in 00 Rs.)	200-300	300-400	400-500	500-600	600-700
No. of families	10	15	25	16	14

Every family getting income more than Rs.50,000 is required to pay 5% of his income VAT. Find the total contribution and average contribution to the VAT by the family?

[Ans. Rs.89,500 and Rs. 2983]

14. Only 10 students took a test out of which 4 have failed with less than 8 marks. The marks of passed students were 10, 12, 9, 8, 15, 11. What was the median marks of
- Passed students
 - All students

[Ans. i. 10.5 marks, ii 8.5 marks]

15. The daily expenditures (in 00Rs.) of 100 families are given below:

Daily Exp. (00Rs.)	0-10	10-20	20-30	30-40	40-50	50-60
No. of families	10	?	25	30	?	10

The median for the distribution is Rs.3000. Calculate the missing frequencies.

[Ans. 15 and 10]

16. The monthly earning (in Rs.00) of 100 workers are given below:

Earnings (in 00Rs.)	15-25	25-35	35-45	45-55	55-65
No. of workers	5	?	37	?	15

The mean earnings of the worker is Rs.4290. Calculate the missing frequencies.

[Ans. 17, 26]

17. Find the appropriate average wage of the worker from the following data:

Wage (in Rs.000) above	0	10	20	30	40	50	60	70
No. of workers	650	500	425	375	300	275	250	100

[Ans. Rs.36670]

18. Calculate the appropriate measure of central tendency from the following distribution and support for your choice of measure.

Daily income (Rs.)	Below 100	1000-1999	2000-2999	3000-3999	4000-4999	5000 & above
No. of family	50	500	555	100	30	15

[Ans. Md.= Rs.2134.64]

19. Find the mean and median from the following information.

Size,Over	5	10	15	20	25	30	35	Up to 40
Frequency	320	295	250	140	105	50	20	320

[Ans. Median = 21.76]

20. Calculate the mean and median from the following data.

Class	10-20	10-30	10-40	10-50	10-60	10-70	10-80	10-90
Frequency	4	16	56	97	124	137	146	150

[Ans. $\bar{x} = 46.33$, Md.=44.63]