



- v) If population is homogeneous, then \_\_\_\_\_ is better method for sampling.
- a) Simple random sampling      b) Stratified  
c) Systematic                      d) two stage
- vi) Range in the data set 8, 10, 20, 9, 15, 10, 13, 28, is \_\_\_\_\_.
- a) 28                                      b) 8  
c) 20                                      d) 0.55
- vii) The mode of the data 2, 8, 9, 9, 17 is \_\_\_\_\_.
- a) 10                                      b) 9  
c) 3                                        d) 17
- b) State whether the following statements are True or False. (Any Five) [5]
- i) A simple interest is depends only on period.  
ii) EMI means equated monthly installment.  
iii) Preferred shares are guaranteed cash dividends.  
iv) The mid point of class interval between 10 and 11 is 10.5.  
v) For a sample at least 50% of population required.  
vi) If a data a having coefficient of variation is 50 standard deviation is 20 then mean of data is 40.  
vii) The median of the data 14, 9, 15, 8, 12 is 12.

**Q2) Attempt any four of the following : [20]**

- a) How long will it take for ₹ 3000 to amount to ₹ 3300 at 4% p.a. simple interest?
- b) Find the difference between compound and simple interest on ₹ 500 For 2 years at 10% p.a. (compounded yearly).
- c) Find the sum will amount to ₹ 4000 in 3 years at 6% compound interest.
- d) Suresh purchase a car for ₹ 10,00,000 on installment basis under equal 24 monthly installments at 12% p.a. Find EMI by reducing method.
- e) Find the amount of annuity of ₹ 400 payable quarterly for 3 years at 16% p.a.
- f) Explain the terms sinking fund and simple annuity.

**Q3) Attempt any two of the following : [10]**

- What is dividend? Explain cash dividend and stock dividend.
- Ramrao invested ₹ 2,50,000 in a mutual fund scheme with entry load of 1% and exist load 2% (for 3 years). He had to redeem all the units after 2 years when net asset value had dropped to ₹ 2,30,000 In the mean while, he has received a dividend of ₹ 15,000 what is his gain or loss percent?
- Two companies have shares of 12% at 134 and 16% at 135. In which of the shares would the investment be more profitable?

**Q4) Attempt any two of the following: [10]**

- Define statistics. Write the scope of statistics in Industry and Economics.
- What is data collection? Write the methods of data collection.
- Explain SRSWOR and draw all possible SRSWOR of size 2 from the observations 3, 4, 7, 9, 11 and 14,

**Q5) Attempt any Four of the following. [20]**

- For the frequency distribution given below.

Daily sales (in thousands Rs.)	10-20	20-30	30-40	40-50	50 & above
No.of shops	12	23	47	10	8

Find

- Class width of second class.
  - State open end class.
  - State type of classification
  - Form less than cumulative frequency distribution.
  - How many shops have sales less than 30,000?
- Draw more than ogive curve for the following frequency distribution.

Marks	0-10	10-20	20-30	30-40	40-50	50-60
No.of students	3	9	15	30	18	5

- c) Compute the mode of the following frequency distribution.

Daily Wages (₹)	50-100	100-150	150-200	200-250	250-300	300-350
No. of Workers	5	15	25	18	12	5

- d) Find the arithmetic and geometric mean of 2, 4, 8, 16, 32.
- e) Two workers on the same job shows the following results over a long period of time.

	Worker A	Worker B
Mean time of completing job (in minutes)	30	25
Standard deviation	06	04

- i) Which worker appears to be more consistent in the time he requires to complete job? Why?
- ii) Which worker is faster in completing the job? Why?
- f) Define range and standard deviation, state the formula for each encase of ungrouped data.