## [5952]-104

## F.Y. B.Com. 114 - A : BUSINESS MATHEMATICS \& STATISTICS - I (2019 Credit Pattern) (Semester - I)

## Time : $2^{1 ⁄ 2}$ Hours]

[Max. Marks: 70
Instructions to the candidates:

1) All Questions are compulsory.
2) Figures to the right indicate full marks.
3) Use of simple calculator is allowed.
Q1) A) Fill in the blanks with suitable choice (Any five):
a) The sum which is repaid with interest is called
i) Principal
ii) Present value
iii) Interest
iv) Amount
$\qquad$ .
b) EMI stands for $\qquad$ .
i) Equal Money Instalment
ii) Equated Monthly Instalment
iii) Equal Monthly Instalment
iy) Easy Money Instalment
c) Shareholders received $\qquad$ on their capital.
i) Interest
ii) Dividend
iii) Rent
iv) Commission
d) SIP is $\qquad$ investment.
i) Lump Sum
ii) Periodic
iii) Fixed
iv) One Time
e) $\qquad$ is the selected set of data under consideration of study.
i) Sample
ii) Population
iii) Census
iv) All of the above
f) Data belongs to quantitative nature is called $\qquad$ .
i) Variable
ii) Attributes
iii) Both
iv) None of the above
g) Average of all observations in a set of data is known as $\qquad$ .
i) Mean
ii) Median
iii) Mode
iv) Standard Deviation
B) State whether following statement is True or False (Any Five):
a) The period for which loan is taken is called Term.
b) Face Value is the value stated in share certificate.
c) NAV stands foe Net Asset Value.
d) Sampling method is less costly method of data collection.
e) The most repetitive observation in the data set is called as mode.
f) Range is calculated by L-S.
g) Upper value of class is called upper limit.

Q2) Solve any three from the following:
a) Find out the simple interest on amount ₹ 25,000 at $7.5 \%$ p.a. for 6 years.
b) Mr. Pradeep purchased a share of ₹ 100 for ₹ 115 . The company declared $18 \%$ dividend. Find the value of return.
c) Compute the mean and mode for the following data.
$96,98,75,80,102,100,94,75$
d) Explain the term Stock Exchange.
e) What is Simple Random Sampling?

Q3) Solve any three from the following:
a) Find the compound interest on ₹ 50,000 at $8 \%$ p.a. for 3 years.
b) Find out how many units of mutual funds has purchased by Sunil if he invested ₹ 20,000 in Reliance mutual fund with N.A.V. of ₹ 40 each. There is no entry load in transaction.
c) Find the mean of the following frequency distribution.

| Weight (kg) | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| No. of students | 1 | 3 | 10 | 4 | 2 |

d) What is SRSWR and SRSWOR?
e) Explain scope of statistics in management science.

Q4) Solve any three from the following:
a) Find EMI on a loan of $5,00,000$ to be paid in 2 years at $12 \%$ p.a. on the outstanding amount at the beginning of each month.
b) Find the mode of the following frequency distribution:

| Class | $0-20$ | $20-40$ | $40-60$ | $60-80$ | $80-100$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Frequency | 4 | 8 | 9 | 20 | 9 |

c) Compute the range and the coefficient of range for the data given below:
$100,24,14,105,21,35,106$
d) State merits and demerits of mean.
e) The frequency distribution of marks obtained by 100 students in F.Y. B.COM. is given below:

| Marks | $0-19$ | $20-39$ | $40-59$ | $60-79$ | $80-99$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| No. of students | 8 | 26 | 24 | 12 | 5 |

Answer the following questions:
i) State the type of classification.
ii) Find the class-mark of $2^{\text {nd }}$ class.
iii) State the class boundaries of $3^{\text {rd }}$ class.
iv) Find the class width of fourth class.
v) Find the number of students getting marks less than 79 .

Q5) Solve the following:
a) Find the median of the following frequency distribution:

| Marks | $10-30$ | $30-50$ | $50-70$ | $70-90$ | $90-110$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| No. of Students | 10 | 40 | 80 | 35 | 15 |

b) Compute standard deviation from the following data:
$2,3,5,2,7,5,7,6,11,12$

## OR

b) Draw histogram of the following frequency distribution:

| Marks | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ |
| :--- | :---: | :---: | :---: | :---: | :---: |
| No. of students | 4 | 12 | 18 | 16 | 3 |

## $\rightarrow \rightarrow \rightarrow$

