

**Tilak Maharashtra Vidyapeeth**  
**Bachelor of Computer Application**  
**1st year Semester I**  
**Subject: - Maths(BCA-122)**  
**Total 60Marks**

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**Assignment No. 1**

**(20 Marks)**

Choose the correct alternative-

1) For frequency distribution formula for MEAN is .....

- a)  $\sum x_i / n$     b)  $\sum f_i x_i / \sum f_i$     c)  $\sum f_i x_i / \sum f_i$     d)  $\sum f_i x_i / n$

2) Mean Deviation about mean is.....

- a)  $\sum (x_i - x) / n$     b)  $\sum x_i - x / \sum x_i$     c)  $\sum f_i (x_i - x) / \sum f_i$     d)  $\sum f_i x / n$

3)  $ax^2 + bx + c = 0$  is .....equation.

- a) Linear    b) Quadratic    c) Standard quadratic    d) Linear quadratic

4) When  $\Delta$  is less than zero then roots are.....

- a) Natural    b) Natural and real    c) Complex conjugate    d) Complex numbers.

5)  $\begin{bmatrix} 1 & 2 & 3 \end{bmatrix}$  order of the given matrix is.....

- a)  $1 \times 2$     b)  $2 \times 1$     c)  $1 \times 3$     d)  $3 \times 1$

6)  $f(x) = 3$  is called .....function.

- a) constant    b) onto    c) Into    d) Bijective.

7) Addition of two MATRICES we must add.....

- a) corresponding elements

b) elements

c) correspondence to elements

d) elements of correspondence

8)  $\begin{bmatrix} x & y \end{bmatrix} = \begin{bmatrix} 1 & 3 \end{bmatrix}$  then value of a is.....

a)1 b)2 c)3 d)4

9).....are called as ECONOMIC BAROMETERS.

a)Index numbers b)Natural numbers c)Whole number d)Integers

10) $b_{xy}$  is called .....of x on y.

a) correlation coefficient b)regression coefficient c)rank correlation coefficient d)covariance

**Assignment No.2**

**(20 Marks)**

Q1) Calculate MEAN ,MODE,MEDIAN for given frequency distribution.

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
frequency	5	12	15	25	8	3	2

Q.2) Find the Mean deviation from the mean for the following data

value	5	6	7	8	9	10	11	12	13	14
Frequency	15	14	13	12	8	9	8	4	8	9

Q.3) Find the mean wages of workers and S.D. for the following distribution of the wages of 200 workers in a factory.

Wages in RS.	40-50	50-60	60-70	70-80	80-90	90-100	100-110	110-120
No. of workers	11	23	40	60	35	16	9	6

Q.4) Expand  $(2x+y)^5$

Q.5)Find how many terms of the A.P. 3,7,11.....are needed to yield the sum 1275?

**Assignment No.3****(20 Marks)**

Q.1) If  $\alpha, \beta$  are the roots of  $x^2+2x+3=0$  find the values of

i)  $\alpha^2 + \beta^2$  ii)  $\alpha^2 + (1/\beta^2)$  iii)  $(\beta/\alpha^2) + (\alpha/\beta)$

Q2) Simplify  $(3+4i)^2/(4+3i)$  and express it in the form of  $a+ib$ .

Q.3) Using the truth table check if given statement is tautology or contradiction

Or neither

Given:  $\neg p \vee q$

Q.4) Do as given

1]  $588-134$ (convert to binary first)

2]  $1011-101$

3]  $10000-01010$

4]  $1AF_{16}$ (convert into decimal)

5]  $235_{10}$ (convert into binary)