



UNIVERSITY OF THE PUNJAB

First Semester – 2019

Examination: B.S. 4 Years Program

Roll No. in Fig.

Roll No. in Words.

PAPER: Business Mathematics

MAX. TIME: 30 Min.

Course Code: MATH-112 Part-I (Compulsory)

MAX. MARKS: 10

Signature of Supdt.:

Attempt this Paper on this Question Sheet only.

Please encircle the correct option. Division of marks is given in front of each question.

This Paper will be collected back after expiry of time limit mentioned above.

Q.1. Encircle the right answer, cutting and overwriting is not allowed. (1x10=10)

1. Common difference of sequence 5,8,11,14,... is
 - a) 3
 - b) -3
 - c) 0
 - d) 1
2. Series obtained by adding term of arithmetic sequences is called
 - a) Harmonic series
 - b) Geometric series
 - c) Arithmetic series
 - d) Infinite series
3. $0! =$
 - a) 0
 - b) 1
 - c) -1
 - d) 2
4. Two matrices A and B are equal if
 - a) Both are rectangular
 - b) Both have same order
 - c) No of columns of A is equal to columns of B
 - d) Both have same order and equal corresponding elements
5. $[0\ 0\ 0]$ is
 - a) Scalar matrix
 - b) Diagonal matrix
 - c) Identity matrix
 - d) Null matrix

P.T.O.



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PAPER: Business Mathematics

Course Code: MATH-112 Part – II

MAX. TIME: 2 Hrs. 30 Min.

MAX. MARKS: 50

ATTEMPT THIS (SUBJECTIVE) ON THE SEPARATE ANSWER SHEET PROVIDED

Q-2 Answer the following short Questions.

(10 × 2 = 20)

- i. Write down standard form of linear equation in single variable.
- ii. Write down the methods of solving quadratic equation.
- iii. Define diagonal matrix.
- iv. Determine the value of p if $|B| = -2$ where $B = \begin{bmatrix} 2 & p \\ 3 & 4 \end{bmatrix}$
- v. What is common difference in arithmetic progression?
- vi. Write down the formula to sum an arithmetic series of n terms.
- vii. In how many different ways can the letters of the word 'RUMOUR' be arranged?
- viii. Find the value of $\log_3 (729)$?
- ix. Evaluate ${}^6P_3 \times {}^5P_2$
- x. Find the 10^{th} term of the sequence 1, 2, 4, 8,.....

Long Questions:

(30)

Q-3 Solve $(x + 5)^2 + (2x - 1)^2 - 67 = (x + 5)(2x - 1)$

(6)

Q-4 Find the adjoint of following matrix.

(6)

$$A = \begin{bmatrix} 2 & 2 & 3 \\ 1 & 0 & -1 \\ 4 & -3 & -2 \end{bmatrix}$$

Q-5 Find the amount of Rs. 5000 deposited each of 4 years at 3% interest compounded annually if each deposit is made at the end of each year

(6)

Q-6 The sum of three numbers in GP is 26 and their product is 216. Find the numbers.

(6)

Q-7 A committee including 3 boys and 4 girls is to be formed from a group of 10 boys and 12 girls. How many different committees can be formed from the group?

(6)