Enrollment No: _____   Exam Seat No:_____

C. U. SHAH UNIVERSITY
Winter Examination-2019

Subject Name : Business Mathematics

Subject Code : 4MS01BMM1   **Branch: BBA**

Semester : 1   **Date : 21/11/2019**   **Time : 02:30 To 05:30**   **Marks : 70**

Instructions:
   (1) Use of Programmable calculator & any other electronic instrument is prohibited.
   (2) Instructions written on main answer book are strictly to be obeyed.
   (3) Draw neat diagrams and figures (if necessary) at right places.
   (4) Assume suitable data if needed.

Q-1   **Attempt the following questions:**   **(14)**

a)	What is the meaning of set?	01
b)	Write the Notation for Z, W, Q & R	01
c)	What is function?	01
d)	Enlist the types of functions.	01
e)	What is r in GP?	01
f)	What is N in binomial theorem?	01
g)	Write the formula for Permutation?	01
h)	What are L and D in AP?	01
i)	What is variable?	01
j)	Give example of empty set	01
k)	Explain roster form with example	01
l)	Write the formula for AP	01
m)	What is power series?	01
n)	List the steps of Mathematical Induction	01

Attempt any four questions from Q-2 to Q-8

Q-2   **Attempt all questions**   **(14)**
   (a)   How can you represent sets? Explain with Imaginary figure   **07**
   (b)   Explain the classification of sets with examples.   **07**

Q-3   **Attempt all questions**   **(14)**
   (a)   If $f(x) = \dfrac{1}{x+1}$ prove that f(-x)-f(x)=$\dfrac{2x}{1-x^2}$ **07**
   (b)   Give the domain ,co domain and range of the function   **07**
          f:A➡B; A={1,2,3,4,5,6};B={1,2,3,4,5,6,7,8,9}, f(x)=2x

Q-4   **Attempt all questions**   **(14)**

(a) The 4th term of an A.P is 19 and its 12th term is 51, find its 21st term.   **07**

(b) The sums of all the terms of an A.P .whose common difference is 2 is 60   **07**
and its last term is 15,find its first term and numbers of terms

Q-5   **Attempt all questions**   **(14)**

(a) The fourth term of a G.P. is 4 and the product of the second and fourth   **07**
term is 1. Find the sixth term and sum to first 6 terms.

(b) Find the A.M., G.M and H.M of the following   **07**
     (1) 2 & 32   (2) 8 & 18

Q-6   **Attempt all questions**   **(14)**

(a) How many different numbers of four digits can be formed from the digits   **07**
2,3,5,6 and 8? Each digit should be used only ones in each number?

(b) Find r , if $^{7}P_r = 60$ x $^{7}P_{r-3}$ **07**

Q-7   **Attempt all questions**   **(14)**

(a) Prove that :$1+3+5+7+\ldots\ldots+(2n-1)=n^2$ **07**

(b) Write the characteristics of Binomial Expansion   **07**

Q-8   **Attempt all questions**   **(14)**

(a) Find the value of $(101)^5$.   **07**

(b) Obtain the sixth term of expansion of $(2a+b)^9$.   **07**