



Exam Seat No. \_\_\_\_

**B. P. COLLEGE OF BUSINESS ADMINISTRATION**

(Constituent College of Kadi Sarva Vishwavidyalaya)

**BBA SEM – I****MCQ TEST September 2013****SUB: Business Mathematics (BBA 03)****Date: 07/09/13****Day: Saturday****Total Marks: 60****Duration: 40 minutes****Instructions:**

- All questions are compulsory.
- All questions carry 2 marks each.

- Q.1 A Set which contains a finite number of distinguishable elements is called\_\_\_\_\_
- (a) Finite Set (b) Infinite Set  
(c) Null Set (d) Equal Set
- Q.2 If  $X = \{ x \mid x \in A \text{ or } x \in B \text{ or, in Both } \}$  then, it is called\_\_\_\_\_
- (a)  $(A \cap B)$  (b)  $(A \cup B)$  (c)  $A'$  (d) None of these
- Q.3 A collection or family of all subsets of a given set is called\_\_\_\_\_
- (a) Universal Set (b) Equivalent Set (c) Power Set (d) Complement of Set
- Q.4 The set which contains all the objects under consideration for the given problem is called \_\_\_\_\_Set
- (a) Proper Subset (b) Power Set  
(c) Subset (d) Universal Set
- Q.5 If  $X = \{ x \mid x \in A \text{ and } x \in B \}$  then, it is called\_\_\_\_\_
- (a)  $(A \cup B)$  (b)  $A'$  (c)  $(A \cup B)'$  (d)  $(A \cap B)$
- Q.6  $Z =$  Set of all Integers then  $A =$ \_\_\_\_\_
- (a)  $\{ 1, 2, 3, 4, \dots \}$  (b)  $\emptyset$  (c)  $\{-3, -2, -1, 0, 1, 2, 3\}$  (d) None of these
- Q.7 If  $A = \{ \{ x \mid x \in N, 1 < y < 5 \} \}$  then,  $A =$ \_\_\_\_\_
- (a)  $\{ 1, 2, 3, 4, \dots \}$  (b)  $\{ 2, 3, 4 \}$  (c)  $\{ 0, 1, 2, 3 \}$  (d) None of these
- Q.8 If  $C = \{ x \mid x^3 - 3x^2 - 4x = 0 \}$  then Set  $C =$  \_\_\_\_\_
- (a)  $\{ 0, -1, 4 \}$  (b)  $\{ 0, 1, 2, 3 \}$  (c)  $\{ 0, -1, 2, 4 \}$  (d)  $\{ 2, 3, 4 \}$
- Q.9 If the elements of one set can be put into one - to - one correspondence with the elements of another set, then these two sets are called \_\_\_\_\_
- (a) Equal Sets (b) Equivalent Sets (c) Proper Subset (d) Subset
- Q.10 If all the elements of Set A are the element of Set B and all the elements of Set B are the elements of Set A then these two Sets are called\_\_\_\_\_
- (a) Proper Subset (b) Subset (c) Equivalent Sets (d) Equal Sets
- Q.11 If  $A \cap B = \emptyset$  then these two sets are called\_\_\_\_\_
- (a) Empty Sets (b) Disjoint Sets (c) Intersection of two Sets (d) Union of Sets
- Q.12  $A \cup A^c =$  \_\_\_\_\_
- (a) A (b)  $\emptyset$  (c)  $A'$  (d) U
- Q.13  $f: A \rightarrow B$   $A = \{1, 2, 3\}$ ,  $B = \{1, 2, 3, 4, 5, 6, 7, 8\}$  and  $f(x) = 2x$  then, Range of a function is \_
- (a)  $\{1, 2, 3, 4, 5, 6, 7, 8\}$  (b)  $\{1, 2, 3\}$  (c)  $\{2, 4, 6, 8\}$  (d)  $\{2, 4, 6\}$
- Q.14  $f: A \rightarrow R$   $A = \{1, 2, 3, 4\}$   $f(x) = 2^x$  then, Range of a function is \_\_\_\_\_
- (a)  $\{1, 2, 3, 4, 5, 6, 7, 8\}$  (b)  $\{1, 2, 3\}$  (c)  $\{2, 4, 8, 16\}$  (d)  $\{2, 4, 6, 8\}$
- Q.15  $f: A \rightarrow R$   $A = \{1, 2, 3, 4\}$   $f(x) = |x - 3|$  then, Range of a function is \_\_\_\_\_
- (a)  $\{2, 4, 6, 8\}$  (b)  $\{0, 1, 2\}$  (c)  $\{2, 4, 8, 16\}$  (d)  $\{1, 2, 3, 4\}$

- Q.16  $f: A \rightarrow R$   $A = \{1,2,3,4\}$   $f(x) = |x - 3|$  then, Do - Main of a function is \_\_\_\_\_  
 (a)  $\{1,2,3,4\}$  (b)  $\{0,1,2\}$  (c)  $\{2,4,8,16\}$  (d)  $\{2,4,6,8\}$
- Q.17  $f: R \rightarrow R$   $f(x) = 8$  is an example of \_\_\_\_\_ function.  
 (a) Constant (b) one - to - one (c) one - to - many (d) many - to - one
- Q.18  $f: N \rightarrow N$   $f(x) = x^2$  is an example of \_\_\_\_\_ function.  
 (a) Constant (b) one - to - one (c) one - to - many (d) many - to - one
- Q.19  $f: Z \rightarrow Z$   $f(x) = x^2$  is an example of \_\_\_\_\_ function.  
 (a) Constant (b) one - to - one (c) many - to - one (d) one - to - many
- Q.20  $f: R \rightarrow R$   $f(x) = x^2 = 2x - 1$ ,  $x \in R$  is an example of \_\_\_\_\_ function.  
 (a) Constant (b) one - to - one (c) one - to - many (d) many - to - one
- Q.21  $U = \{1,2,3,4,5,6,7,8,9,10\}$  and  $A = \{2,4,6,8,10\}$  then  $A^c =$  \_\_\_\_\_  
 (a)  $\{2,4,6,8,10\}$  (b)  $\{1,3,5,7,9\}$  (c)  $\{2,4\}$  (d) A
- Q.22 If  $U = \{1,2,3,4,5,6\}$ ,  $A = \{2,3,6\}$ ,  $B = \{3,5,6\}$  then  $(A \cup B)'$  = \_\_\_\_\_  
 (a)  $\{1,3,5,7,9\}$  (b)  $\{2,3,6\}$   
 (c)  $\{1,2,3,4,5,6\}$  (d)  $\{1,4\}$
- Q.23 If  $f(x) = \frac{ax+b}{bx+a}$  then, prove that  $f(x) * f(\frac{1}{x}) =$  \_\_\_\_\_  
 (a) 0 (b) 1 (c)  $ax + b$  (d)  $bx + a$
- Q.24 If Profit function is  $10x - 20,000$  and Production is 2,500 Units then profit is \_\_\_\_\_  
 (a) 10,000 (b) 20,000 (c) 25,000 (d) 5,000
- Q.25 If the Revenue function of the commodity is  $R(x) = 125x - \frac{3x^2}{2}$ , find the revenue for demand  $x = 20$ .  
 (a) 1900 (b) 1800 (c) 2000 (d) 2200
- Q.26 The fixed cost of pressure cooker is Rs. 1, 50,000 and the variable cost per cooker is Rs. 200. If Selling price of a cooker is Rs. 350, find the number of cookers to be produced for no profit - no loss.  
 (a) 1,200 (b) 1,000 (c) 800 (d) 1,600
- Q.27  $\lim_{x \rightarrow 3} f(x) = 4$ , then  $\lim_{x \rightarrow 3} (f(x))^2 =$  \_\_\_\_\_  
 (a) 4 (b) 9 (c) 16 (d) B & C Both
- Q.28  $\lim_{x \rightarrow 3} f(x) = 4$ , then  $\lim_{x \rightarrow 3} f(x) = \sqrt{x}$   
 (a) 3 (b) 12 (c)  $\sqrt{3}$  (d) 2
- Q.29 The Union of two sets  $A \cup B$  has 48 elements. Set A contains 27 elements and Set B contains 30 elements. How many elements are in  $A \cap B$ .  
 (a) 48 (b) 9 (c) 27 (d) 30
- Q.30 In a survey of 100 coffee drinkers, it was found that 70 take sugar, 60 take Cream and 50 take both sugar and cream with their coffee. How many coffee drinkers take sugar or cream with their coffee?  
 (a) 100 (b) 60 (c) 50 (d) 80