SC

SEAT No._____ No. of Printed Pages : 2

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SARDAR PATEL UNIVERSITY

NOVEMBER-DECEMBER : 2017 EXAMINATION, BBA (FT) SEMESTER : I

THURSDAY, 16/11/2017 2010 Batch (NC)

MORNING SESSON TIME : 10.00 PM. TO 12.00 P.M.

SUBJECT CODE : UM01CBBF04

BUSINESS MATHEMATICS

TOTAL MARKS : 60

Q-1 (A) If A = { 2, 4}, B = {2, 4, 6} then find [05]
(1) AUB (2) A∩B (3) AXB (4) AXA (5) A-B

Q-1 (B) Define the terms : [05]
Subset, Null set, Universal Set, Complement of a set, Intersection of sets.

Q-1 (C) State De'Morgan laws and verify it for U = {1, 2, 3, 4, 5, 6, 7, 8, 9, 10} [05]
A = {1, 2, 5, 6, 8}, B = {2, 4, 6, 10}

OR

Q-1 (A) If A = {1, 3}, B = {5, 6} and C = {6, 9} then verify that [05]
(1) AX(B∩C) = (AXB) ∩ (AXC)
(2) AX(BUC) = (AXB) U (AXC)

Q-1 (B) State De'Morgan laws and verify by Venn diagram (AUB)' = A'∩B' [05]

Q-1 (C) If A = set of letters of the word "HUMAN" [05]
B = Set of letters of the word "WOMAN"
C = Set of letters of the word "MAN"
Then find
(1) C X (A – B) (2) C X C

Q-2 (A) Show that (-1, -1), (1, 5), (2, 8) are colliner points. [05]

Q-2 (B) Find 'a' if the distance between P(-3,-2) and Q(a,1) is $3\sqrt{10}$. [05]

Q-2 (C) Obtain the equation of a line having slope m and passing through point (x_1, y_1). [05]

OR

Q-2 (A) Find the equation of a line passing through the point (2,3) and making equal intercepts on the axes. Also find its slope. [05]

Q-2 (B) Find the equation of a line perpendicular to the line 2x-y-8=0 and passing through the point of intersection 5x+y+4=0 and 2x+3y-1=0. [05]

Q-2 (C) Find the area of triangle with vertices (-2, -2), (0,4) and (5,1). [05]

Q-3 (A) What is an aggregate amount for Rs. 4,000 at 12% rate of compound interest is compounded for 3 years (1) Annually (2) Semi Annually. [05]

Q-3 (B) At what rate of simple interest will be 800 amount to Rs. 836 in 9 months? [05]

(P.T.O.)

Q-3 (C) Explain the terms : [05]

(1) Principle (2) Amount (3) Rate of interest

(4) Compound interest (5) Simple interest.

OR

Q-3 (A) A certain sum at a given rate of simple interest per annum becomes Rs. 2640 in two years and Rs. 3,000 in five year. Find the principle and rate of interest. [06]

Q-3 (B) Find the difference of simple interest and compound interest of Rs. 1500 for 3 years at the interest of 6% per annum. [05]

Q-3 (C) Calculate the amount of Rs. 5,000 at 12% per annum compound interest of 3 years. [04]

Q-4 (A) Explain ratio and proportion also write the difference between ratio and proportion. [05]

Q-4 (B) In 500 mixture of milk and water milk is 450 liters. Find the percentage of water in mixture. [05]

Q-4 (C) 56 persons make 192 packets of sweets in a certain period. How many persons will make 144 packets in the same period? [05]

OR

Q-4 (A) Write the meaning and properties of ratio. Also write the meaning of proportion. [05]

Q-4 (B) 75 men can finish a piece of work in 100 days. How many more should be engage to complete the work in 30 days. [05]

Q-4 (C) If 32 is added to the 80% of a number, the result is the number itself. Find the number. [05]

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