

[20]
Eng

SEAT No. _____

No. of Printed Pages : 3

SARDAR PATEL UNIVERSITY

MARCH - APRIL : 2019 EXAMINATION, B.COM. SEMESTER : II

THURSDAY, 28/03/2019

MORNING SESSION TIME : 10.00 TO 12.00 PM

SUBJECT CODE : UB02CCOM23

BUSINESS MATHEMATICS & STATISTICS - II

TOTAL MARKS : 60

Q-1 (A) If $y = \left(\sqrt{x} - \frac{1}{\sqrt{x}} \right) \left(\sqrt{x} + \frac{1}{\sqrt{x}} \right) \left(x + \frac{1}{x} \right)$ then find dy/dx . [05]

Q-1 (B) Write the rules of differentiation. [05]

Q-1 (C) At which point $f(x) = x^3 - x^2 - x + 2$ is maximum ? and at which point minimum? [05]

OR

Q-1 (A) If $y = \left(\frac{2x+3}{4x+5} \right)^6$ then find dy/dx . [05]

Q-1 (B) If cost function $C(x) = 2x^2 + \frac{108}{x} + 25$ where x is commodity, find the value of x for [05]
which cost is minimum, also find minimum cost.

Q-1 (C) If $y = (x^3 + 4x) \times (4x^2 - 3)$ then obtain dy/dx . [05]

Q-2 (A) Find the value of n if [05]
 ${}_nP_3 : {}_{(n+2)}P_3 = 5:12$

Q-2 (B) How many words can be formed using all the letters of the word "SEJAL"? out of [05]
them how many words (1) Start with 'L' (2) Start and end with vowel.

Q-2 (C) Find the number for committees of 5 members from 7 boys and 4 girls can be [05]
formed such that committee contains at least one girl.

OR

Q-2 (A) Find n if [05]

(1) ${}_nP_4 = 840$

(2) ${}_nP_3 = 6 \cdot {}_nC_5$

Q-2 (B) A question paper containing 10 questions is divided into two section, having 5 [05]
questions in each section. If student has to write 6 questions in such a way that at
least two questions must to take from each section, then how many ways he can
select the questions.

(P.T.O.)