

B.B.A. Semester - 1 (CBCS) Examination**Feb/Mar. -2021 (NEW COURSE)****ELEMENTS OF BUSINESS MATHEMATICS (ELECTIVE/ALLIED)****Time: 1:30 Hours****Marks: 42****Instructions:**

1. Figures to the right indicate marks.
2. There are five questions in the question paper.
3. Answer any three of the following questions.

Q.1 (A) Find n if $2^{n+1} P_{n-1} : 2^{n-1} P_n = 3:5$ (07)

(B) How many 4 digits number can be formed by using the numbers 0, 1, 2, 3, 4, 5, 6 (07)

once only? How many of them are (1) divisible by 5 (2) greater than 4500

Q.2 (A) The sixth term of an A.P is 121. Find the sum of its first 11 terms. (07)

(B) Three number are in A.P. Their sum is 15 and the sum of their squares is 93. Find (07)
three Numbers.

Q.3 (A) State binomial theorem and give its properties. (07)

(B) Find out coefficient of x^7 in the expansion of $\left(\frac{x^2}{2} - \frac{2}{x}\right)^8$. (07)

Q.4 (A) Explain the meaning of interpolation and extrapolation. (07)

(B) Find the quadratic polynomial by using NBIF from the following data and then (07)
obtain $f(4)$

X	1	3	5
Y	2	10	26

Q.5 Prove that. (14)

1. $1(1!)+(2!)+(3!)+\dots+n(n!) = (n+1)!-1, n \in N$

2. $(1)(2)+(2)(2^2)+(3)(2^3)+\dots+n(2^n)=(n-1)2^{n+1}+2, n \in N$
