UNIT- II – SOLUTION OF ALGEBRAIC AND TRANSCENDENTALEQUATION

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1. Find the solution by using Bisection method

a. Fifth root of 35 b. $e^x + x$ c. Log(x) + 1

2. Use Newton Raphson method to obtain a root to three decimal places of the following equation:

a. $x \sin x + \cos x = 0$ b. $x^3 + x^2 + x + 7 = 0$

3. Use Regular falsi method to find the roots of

a. $f(x) = x^3 - 18$ Correct up to four decimal places. b. xe^x

4. Use secant method to find the root of the following

a. $4x^3 + 5x^2 + x$ b. xlog(x) – 5

5. Given the following data find f(5); f (0)=659; f(2)=705; f(4)=729; f(6)=804.

6. Prepare Backward difference table for $f(x) = x^2 - 2x + 5$ for x=0, 2, 4, 6, 8

7. Use Newton Backward difference interpolation formula to find f(18)

X	:	5	10	15	20	25	30
Y	:	1	3	11	31	69	13

8. Using Newton's forward difference interpolation formula to estimate the population of a town for the year 1896

Year	:	1891	1901	1911	1921	1931
Population	:	50	60	75	89	100

9. Using Lagrange's interpolation formula to find the value of y when **x = 8**

X	:	0	2	4	6
Y	:	2	5	10	15

10. Show that **:** $\Delta\nabla = 1 - E$.

Also find the missing term of the following

X	:	2	4	6	8
Y	:	10	?	13	20

Miss. Aayesha Ansari
Assit. Prof. (Mathematics)