

ASSIGNMENT

B.Sc. 6th semester

Mathematics(major)

Paper-6.2 (Numerical Analysis)

Marks-15

1. What do you mean by finite difference of $f(x)$ 1

2. What do you mean by argument and entry in a difference table? 1

3. Write about forward and backward difference? 1

4. Evaluate

i. $\Delta(x^2 + 2x)$ 1

ii. $\Delta \log x$ 1

5. Find the 1st and 2nd derivatives of the function $y=f(x)$ tabulated below at the point $x=1.1$ 5

X : 1.0 1.2 1.4 1.6 1.8 2.0

Y: 0.0 0.128 0.544 1.296 2.432 4.0

6. A slider in a machine moves along a fixed straight rod. Its distance x cms along the rod is given below for various values of the time t secs. Find the velocity of the slide when $t=0.2$ sec.

t: 0 0.1 0.2 0.3 0.4 0.5 0.6 5

x: 30.13 31.6 32.87 33.64 33.95 33.8 33.24