

Internal Assessment Examination - 2021
Sem - VI Subject code: MTMGDSE03T.
(Numerical Analysis)
F.M. - 10

Alloted Time: 45 min.

Answer any two questions from the following: $5 \times 2 = 10$

1. Calculate $\int_1^2 (x + \frac{1}{x}) dx$ upto two significant figures by Simpson's $\frac{1}{3}$ rule taking 4 intervals.

2. From the following table compute $f(0.5)$ by Newton's forward formula.

x	0	1	2	3	4	5
$f(x)$	0	7	26	63	124	215

3. From the following table construct the difference table and compute $f(21)$ by Newton's backward formula.

x	0	5	10	15	20
$f(x)$	1.0	1.6	3.8	8.2	15.4

4. Apply the method of bisection to find the positive root of the equation $x^3 - x - 1 = 0$ correct upto two significant digits.

5. Use Trapezoidal rule to evaluate $\int_0^6 \frac{dx}{(1+x)^2}$ taking six equal sub-intervals, correct to 3 decimal places.

NB: Answers must send to mail id: prafulla_d2003@yahoo.co.in
if fail to do send to whatsapp no. - 9433437852