

# Kathmandu University

First In-semester Examination-2025

Department of Artificial Intelligence, Panchkhal

Level: B.Tech Artificial Intelligence

Course: AIMA 203

Year: II

Semester: II

Time: 15 minutes

F.M. : 10

---

Name:

Roll No:

Marks-Scored:

---

SECTION "A" [10 Q  $\times$  1 = 10 marks] (*Do any ten*).

Fill in the blanks by writing the most appropriate word(s) or symbol(s).

1. Write the number of significant digits in 20300.00 \_\_\_\_\_.
2. Write the precision and accuracy of 45.2030 \_\_\_\_\_.
3. Find the upper limit error in rounding a number to 4 decimal places. \_\_\_\_\_.
4. What is the maximum number of positive real roots of  $x^5 - x^4 + 3x^3 - x^2 - x + 2$ ?  
\_\_\_\_\_.
5. Which error: Truncation error or rounding off error in Newton Raphson's method?  
\_\_\_\_\_.
6. Which one converges faster bisection method or secant method? \_\_\_\_\_.
7. Write the disadvantage of "Lagrange's Interpolation method": \_\_\_\_\_  
\_\_\_\_\_.
8. Write the advantage of "Secant method over Newton Rapshon's method":  
\_\_\_\_\_.
9. Write the formula for  $\Delta y_1$  and  $\nabla y_1$ : \_\_\_\_\_.
10. What is the difference of interpolation and extrapolation. \_\_\_\_\_  
\_\_\_\_\_.
11. Calculate the number of steps taken by Bisection method to get the accuracy less than  $10^{-3}$ . \_\_\_\_\_.