ARKA JAIN University, Jharkhand

1st Semester 1st Internal Examination – 2023-2024

Subject: Remedial Mathematics

Course: B. Pharm   **Full Marks: 30**

Time: 1 Hour

All the questions are compulsory

I. Long Answers (Answer 1 out of 2) = 1 x 10 = 10

1. Evaluate $\lim\limits_{x \to 2} \dfrac{x^2-4}{\sqrt{3x-2}-\sqrt{x+2}}$.

2. Find the partial fractions of $\dfrac{x+1}{(x+2)(x+3)(x-1)}$

II. Short Answers (Answer 4 out of 6) = 4 x 5 = 20

1. Evaluate the value of $\lim\limits_{x \to 0} \dfrac{(sin2x+3x)}{(2x+sin3x)}$

2. Prove that log10+2log3-log2=log45

3. Find the partial fraction of $\dfrac{2x+3}{(x+3)(x+1)}$

4. If f(x) = x × sin (1/x), x ≠ 0, then find $\lim_{x \to 0}$ f(x).

5.   If f(x)= x^3+2x^2+3x+4 find f(2x+1).

6. Evaluate $\lim\limits_{x \to 4} \dfrac{x^4-64}{x^2-16}$.