**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**

1. **Long Answers (Answer 1 out of 2) = 1 x 10 = 10**
2. Evaluate $\lim\_{x\to 2}\frac{x^{2}-4}{\sqrt{3x-2}-\sqrt{x+2}}.$

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

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

1. Evaluate the value of $\lim\_{x\to 0}\frac{(sin2x+3x)}{(2x+sin3x)}$
2. Prove that log10+2log3-log2=log45
3. Find the partial fraction of$\frac{2x+3}{\left(x+3\right)\left(x+1\right)}$
4. If f(x) = x × sin (1/x), x ≠ 0, then find Limx→0 f(x).
5. **If f(x)= x3+2x2+3x+4 find f(2x+1).**
6. Evaluate $\lim\_{x\to 4}\frac{x^{4}-64}{x^{2}-16}.$