GIRLS' HIGH SCHOOL AND COLLEGE,PRAYAGRAJ

2020 – 2021

CLASS - 12 B & C

SUBJECT: MATHEMATICS

E-LEARN ASSIGNMENT NO. 3

Ls : INDETERMINATE FORMS

INSTRUCTIONS: Parents please ensure that your ward watches the video instructions for the assignment by clicking on the link . https://youtu.be/KaXsQvpq770

https://youtu.be/SgsN2_p-XRc

She should revise the lesson given in the book and then work on the assignment. Completed assignment is to be downloaded and filed /pasted in the subject file/copy and kept ready for submission. The date and procedure of submission shall be notified later**.**

Exercise

Evaluate the following using L ' Hospital's rule.

1. $\lim_{x\to 3} \frac{x^4-81}{x-3}$
2. $\lim_{x\to 2} \frac{e^x - e^2}{x-2}$
3. $\lim_{x\to 0} \frac{2\tan^{-1}x - x}{2x - \sin^{-1}x}$
4. $\lim_{x\to 0} \frac{x - sinxcosx}{x^3}$
5. $\lim_{x\to 3} \frac{(\tan^{-1}x)^2}{\log(1+x^2)}$
6. $\lim_{x\to 0^+} \frac{logcotx}{e^{cosec^2 x}}$
7. $\lim_{x\to 3} \frac{(\tan^{-1}x)^2}{\log(1+x^2)}$
8. $\lim_{x\to 0} \frac{cotx}{\cot 2x}$
9. $\lim_{x\to 0^+} \log_{tanx} tan2x$
10. $\lim_{x\to \infty} \frac{x^4+x^2}{e^x+1}$