Date: 23/4/2019

**Summary Report on WIT & WIL**

**(Daily Report)**

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| **Name of the Faculty: Dr. N. Pothanna** | | | | **Name of Subject: LAODE&LT** |
| **Class/Section: I B.Tech. II Sem/ECE-D** | | | | |
|  | Grid Reference No.: | | 6.2 | | |
|  | Scenario Reference No.  (Mapping with Syllabus) | | 6.2.3 | | |
|  | Topic covered in every class | | ODE using Laplace Transform | | |
|  | **Brief write-up (500 words) for every class:**  The method of Laplace transforms is a system that relies on algebra (rather than calculus-based methods) to solve linear differential equations. While it might seem to be a somewhat cumbersome method at times, it is a very powerful tool that enables us to readily deal with linear differential equations with discontinuous forcing functions.  To solve a linear differential equation using Laplace transforms, there are only 3 basic steps:  1. Take the Laplace transforms of both sides of an equation.  2. Simplify algebraically the result to solve for L{y} = Y(s) in terms of s.  3. Find the inverse transform of Y(s). (Or, rather, find a function y(t) whose Laplace transform matches the expression of Y(s).) This inverse transform, y(t), is the solution of the given differential equation.  The nice thing is that the same 3-step procedure works whether or not the differential equation is homogeneous or nonhomogeneous. The first two steps in the procedure are rather mechanical. The last step is the heart of the process, and it will take some practice. | | | | |
|  | Relevant additional illustration if any: |  | | | |
|  | Video Links/ Web Links if any: | <https://www.youtube.com/watch?v=kbp9qWS-Bsk>  <https://www.math.psu.edu/tseng/class/Math251/Notes-LT1.pdf> | | | |
|  | Signature of Repository Administrator: |  | | | |