

**SRM Institute of Science and Technology  
Ramapuram Campus.**

**Department of Mathematics**

**Assignment – 3**

Sub. Code: 18MAB102T

Sub. Title: Advanced Calculus and Complex Analysis

Year : I Year B. Tech. (Common to all Branches)

Date of Submission : on or before 20.06.2021

Date: 16.06.2021

Max. Marks: 10

Semester : II

**Unit 3**

**Laplace Transforms**

1. Find  $L(2e^{-3t} + 3t^2 - 4\sin 2t + 2\cos 3t)$ .

2. Find  $L[e^{-at} \cos bt]$ .

3. Find  $L(t \sin 2t)$ .

4. Find  $L^{-1}\left(\frac{1}{s-3} + \frac{1}{s} + \frac{s}{s^2-9}\right)$ .

5. Find  $L^{-1}\left(\frac{s}{(s+2)^2}\right)$ .

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