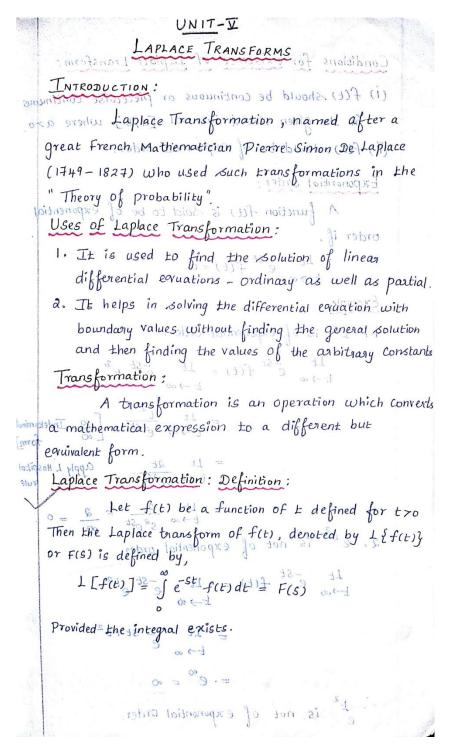




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UNIT-V LAPLACE TRANSFORM





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#### UNIT-V LAPLACE TRANSFORM

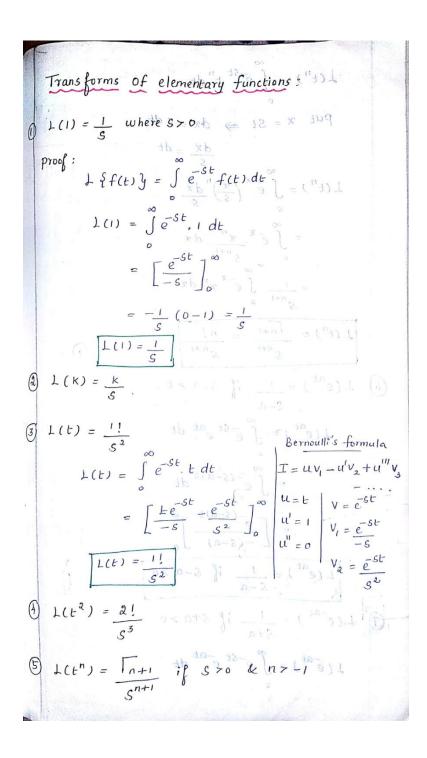
Conditions for existence of Laplace transform:
(i) f(t) should be continuous or piecewise Continuous
in the given closed interval [a,b] where a>0
(ii) f(t) should be of exponential order.
Exponential order:
A function f(t) is said to be of exponential
order if,
especially a Leiszberg start land at large at the leiszberg $e$ $f(t) = 0$ .
The first of the first of the first of the first of
at it hops in solving the differential configuration
asit log large is of exponential order was sentimed
curt than finding the values of the consisting constants
studied of practical of the soular and probabilities and the est $f(t) = \int_{t \to \infty}^{t} e^{-st} dt$
Tidekini to a different but form
= Lt at apply L Hospito
ent of benish the motion of exponential order is (2) and order is not of exponential order is (2) and
$\begin{array}{cccccccccccccccccccccccccccccccccccc$
From 6
= e <sup>\pi</sup> = \pi
e is not of exponential order.



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UNIT-V LAPLACE TRANSFORM

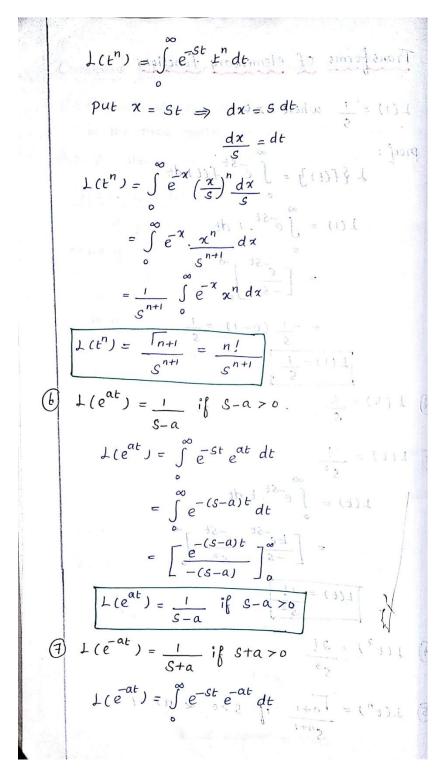






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UNIT-V LAPLACE TRANSFORM

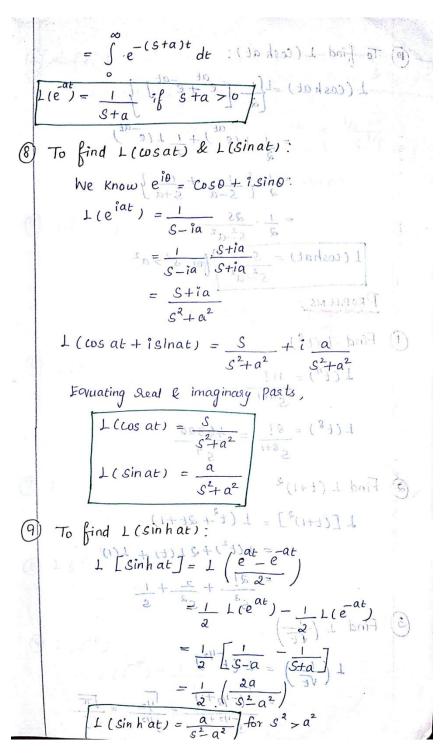






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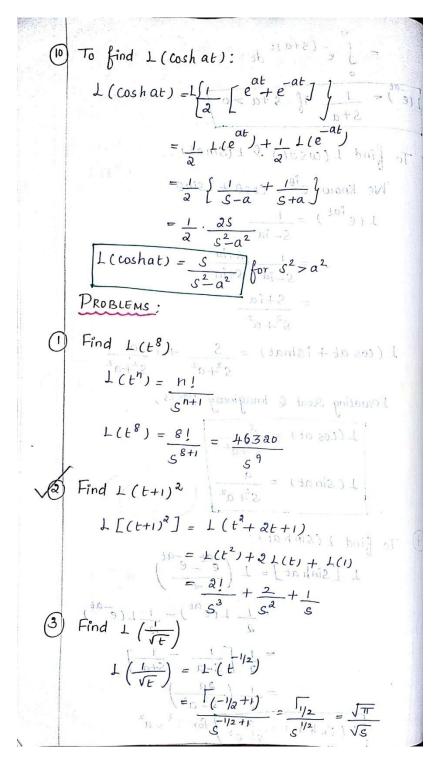






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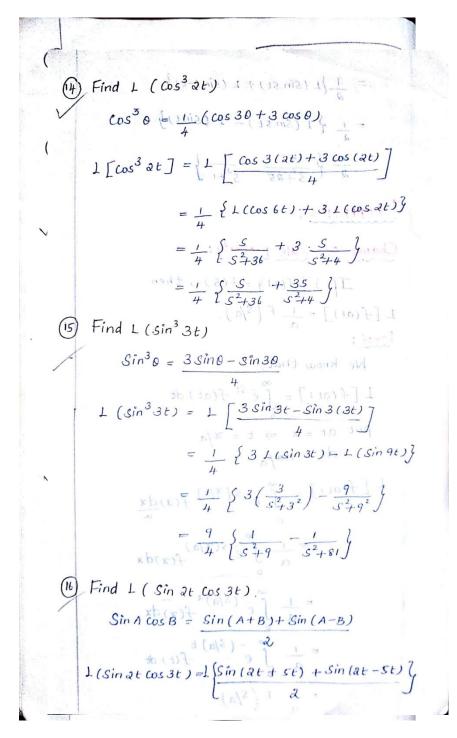
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UNIT-V LAPLACE TRANSFORM





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UNIT-V LAPLACE TRANSFORM

$$= \frac{1}{2} \{ L(Sin St) + L(Sin (-t) \} \}$$

$$= \frac{1}{2} \{ L(Sin St) - L(Sin t) \}$$

$$= \frac{1}{2} \{ L(Sin St) - L(Sin t) \}$$

$$= \frac{1}{2} \{ L(Sin St) - L(Sin t) \}$$

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