**Unit IV Assignment**

Que-1 MCQ

1. The Laplace Transform of tn , n>0 is given by

1) 2)  3) 

1. Laplace transform of cosat
2. s/s2+a2 2) s/s2-a2  3) a/s2+a2
3. The Laplace transform of eat tn is given by

1)  2)  3) 

1. Laplace transform of coshat

1) s/s2+a2 2) s/s2-a2  3) a/s2+a2

1. The laplace transform of eat
2. 1/s-a 2) a/s-a 3) s/s+a
3. The laplace transform of eatsinbt

1) 1/(s-a)2 +b2 2) b/(s-a)2 +b2 3) a/(s-a)2 +b2

1. The numerical value of is
2.  2)/2 3) 1
3. The numerical value of is

1) 2)/2 3) 0

1. 2Sin A CosB=
2. Sin (A+B) +(Sin (A-B) 2) Sin (A+B) -(Sin (A-B) 3) Cos(A-B)- Cos(A+B)
3. 2SinA SinB=
4. Sin (A+B) +(Sin (A-B) 2) Sin (A+B) -(Sin (A-B) 3)Cos(A-B)- Cos(A+B)

Que-2 Find Laplace transform of following functions.

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| --- | --- | --- | --- |
| 1 | Sin 2t Sin 3t | 14 | e6tSin 4t Cos 7t |
| 2 | Cos22t | 15 | t2e-2t |
| 3 | Sin32t | 16 | e-3t Sin 5t Sin 3t |
| 4 | (Sin t- Cos t)2 | 17 | t2 Sin at |
| 5 | e2t+4t3-2 Sin 3t+3 Cos 3t | 18 | t2cosat |
| 6 | 1+  | 19 | t sin22t |
| 7 | Cos (at+b) | 20 | t e-tSin3t |
| 8 | SinatSinbt | 21 | t e2tSin3t |
| 9 | t –Sinh2t | 22 | t2 e-3t Sin 2t |
| 10 | e-3t(2cos5t-3sin5t) | 23 | $$\frac{1-e^{t}}{t}$$ |
| 11 | e3tsin2t | 24 | $$\frac{Cosat-Cosbt}{t}$$ |
| 12 | e4t Sin 2t Cos t | 25 | $$\frac{Cos2t-Cos3t}{t}$$ |
| 13 | e6tSin 4t Cos 7t | 26 | $$\frac{e^{at}-Cosbt}{t}$$ |