Hall Ticke	et Number :								Γ		
Code: 40	GC14		·			<u>,</u>	<u>, , , , , , , , , , , , , , , , , , , </u>			R-14	
	B.Tech. I Y	,	M	athei	ry Exc matic: All Bro	s-I		Marc	ch 202	21	
Max. Mc Answer a	ırks: 70 II five units b			e que ****	stion fr		-	ınit ( 5 :		me: 3 Hc 70 Marks	
1.	Find the orth	ogonal tr	ajectori			ly of cu	urves	$r^n = a^n$	$\cos n_{"}$		14M
2.	Solve $(D^3 -$	$+1)y = e^{-}$	$x^{2} + \cos(2\theta)$	2x-1	OR						14M
3.	Verify Rolle'	theorem	for $f(x)$			n [0, <i>f</i> ]					14M
4.	Verify the N			x=1.			$(x)^{\frac{5}{2}}$ with	th Lagr	range's	form of	14M
5.	Trace the cu	rve $y^2(2$	(a-x) =		JNIT–III						14M
6.	Change of $\int_{0}^{1} \int_{x^2}^{2-x} xy \ dxdy$	order of	integra	ation a	<b>OR</b> and he	nce e	valuat	e the	double	integral	14M
7.	Find the Lap			f perio		ction					
	$f(t) = \begin{cases} 1, \\ -1, \end{cases}$	a/2 < t	$\left\langle a\right\rangle$ A	ndf(t)	(+a) = j	f(t).					14M
8.	Solve $y^{11} + 2$ technique.	$y^1 + 5y =$	$e^{-t}$ , $y(0)$				usin	g Lap	lace t	ransform	14M
9.	Find the di $\overline{i} + 2\overline{j} + 3\overline{k}$ .	rectional	derivat		<b>JNIT–V</b> f 2 <i>xy</i> +		(1,-1,	3) in t	he dire	ection of	4 4 8 4
	ι 1 2 J 1 3 N .				OR						14M
10.	Verify Gaus	_			for $\overline{F}$		-			ken over	14M