

SJB Institute of Technology





Department of Information Science and Engineering

Course Outcomes and CO-PO-PSO Articulation Matrix

Batch 2018-22

Course Outcomes and CO-PO-PSO Articulation Matrix Batch 2018-22

Semester-I/II

Subject:	Progran	nming	in C &	Data S	tructu	res				Subje	ect Co	de: 18P	CD13/	23	
							rse Ou								
C103.1	Achie	ve Kno	owledg	ge on co	mpute	ers and	basic	concep	ts of ne	etworks	S.				
C103.2	Apply	the ba	sic pri	nciples	of de	sign an	d deve	lopmei	nt of C	Progra	mming	g.			
C103.3	Desig	n and o	develo	pment o	of mod	lular pı	rogram	ming s	kills.						
C103.4	Demo	nstrate	Array	s and S	strings	in C p	rogran	nming	concep	ts.					
C103.5	Illustr	ate the	basic	concep	ts of S	tructui	es, uni	ons, Po	ointers	and Pr	eproce	ssor Di	rective	es.	
	<u></u>				(CO-PC)-PSO	Mapp	ing						
CO						P	Os							PSOs	r
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C103.1	3	2	2											2	
C103.2	3	3	2	3										2	
C103.3	2	3	3	2	2									2	
C103.4	2	3	3	2										2	
C103.5	3	2	2	2										2	
C103	2.6	2.6	2.6	2.25	2									2	

Subject:	Compu	iter Pr	ogram	ming	Lab					Subje	ect Co	de: 180	CPL16	/26	
<u> </u>								tcome							
C106.1	Unde		the kno	owledg	e on si	mple a	pplicat	tions in	C usir	ng cond	litional	statem	nents a	nd loop	oing
C106.2	Demo	onstrate	e and in	nplem	ent app	licatio	ns usin	ng array	s and	strings					
C106.3	Apply	y know	ledge	on fund	ctions,	recursi	ons, po	ointers	and str	ructures	S.				
					(CO-PC)-PSO	Mapp	ing						
						P	Os							PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C106.1	3	2	2	2										3	
C106.2	3	3	2	2										3	
	i							ļ	 		 	 		l .	

_												
1	C106	3.0	2.67	2.33	2.33	1.0					3	
_		L										

Semester-III

Subject:	Engine	ering l	Mathen	natics-	III					Subi	ect Co	de: 181	MAT31		
					-	Cou	rse Ou	ıtcome	S	J			***************************************		
C201.1	Use	Laplac	e trans	form a	and in	verse l	aplace	transf	orm in	solvir	ng diffe	erential	/ inte	ral en	uation
	arisin	g in net	work a	nalysis,	contro	l systen	ns, and	other f	ields of	engine	ering.			•	
C201.2	Demo	nstrate	e the F	ourier s	series t	o stud	y the b	ehavio	r of pe	riodic f	unction	s and	their a	pplicati	ons in
	syster	n comr	nunicat	ions, di	gital sig	gnal pro	cessing	g and fid	eld thed	ry.					
C201.3	Make	use .	of Foui	rier tra	nsform	and Z	'-transf	orm to	illustr	ate dis	crete/c	ontinuo	ous fui	nction	arising
0004.4	in way	ve and	neat pr	opagati	on, sigr	าals and	l syster	ns. s							
C201.4	Solve	first	and s	econd	order	ordina	ry diff	ferentia	l equa	tions	arising	in en	gineeri	ng pro	blems
C204 F	using	single s	step and	d multis	tep nu	merical	metho	ds.							
C201.5	Deter	mine 1	the ext	ternals	of fur	nctiona	l using	calcu	us of	variati	ons an	d solv	e prol	olems a	arising
	ın ayn	amics	of rigid	bodies											
						CO-PC		Mapp	ing						
COs			· · · · · · · · · · · · · · · · · · ·		r	P	Os							PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C201.1	3	2													
C201.2	3	2													
C201.3	3	2													
C201.4	3	2													
C201.5	3	2													
C201	3	2													

Subject:	Data	Struc	tures	and A	Appli	cation	1S			Subj	ect Co	de:180	CS32	1011	
						Cou	rse Ou	tcome	S						
C202.1	Able	to und	lerstand	d funda	menta	ls of C	langua	ige and	defini	tion of	data st	ructure	S		
C202.2	Anal	yze an	d demo	onstrate	the sta	acks, q	ueues (operati	ons and	d its an	plication	ons			
C202.3	Creat	te data	storage	using	linked	l lists c	oncept	s and c	lemons	trate its	s applie	cations			
C202.4	Cons	truct 1	trees d evaluat	lata st ion.	ructure	es and	perfo	rm op	eration	is suct	n as t	raversa	ls, sea		
C202.5	Use g	graph l andlin	based og basic	lata str s	ucture	s appro	oach fo	r stori	ng, sor	ting,se	earchin	g of da	ata and	d unde	rstand
					(CO-PC)-PSO	Mapp	ing						
COs						P	Os							PSOs	
COS	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C202.1	2	2	2										1		
C202.2	2	2	2										2		
C202.3	3	2	3		2								3		
C202.4	2	2	3	2											
C202.5	1	2	3	3	2								2		
C202	2	2	2.6	2.5	2								2		

Subject:	ANALOG AND DIGITAL ELECTRONICS	Subject Code: 18CS33
	Course Outcomes	
	Make use the BJTs, Operational Amplifier circuits an circuitswith its characteristics in the circuit configura	tion.
C203.2	Implement the expressions in Combinational Logic of	ircuit, Simplification Techniques using

	Karna	ugh Ma	aps, Qi	ineMo	Clusk	y techn	nique a	nd Peti	icks M	ethod.					
C203.3	A a 1	ring or	d disco	acc On	eration	of De	coders	Enco	ders. M	lultiple	xers, A	dders :	and Sul	otracto	rs.
C203.4	Demo	nstrate	the La	tches,	Flip-Fl	ops fo	r desig	ning R	egister	s in dif	ferent	scenari	os in a	igitai	
	circuit	is							<u> </u>		o of C	· m oh no	nous at		
C203.5	Recog	nize th	ie vario	ous con	nplicat	ed issu	ies in r	espect	of peri	ormano E Stata	te oi s Tabla	ynchro	nous ai	Iu	
	Async	hronou	is cour	iters in	Seque	ntial C	rcuits	and de	esign o	State	Table	and gra	pıı.		
								Mapp	ıng					PSOs	
COs						P	Os			10	44	10	1	2	3
COS	1	2	3	4	5	6	7	8	9	10	11	12	1		3
C203.1	2	2	3	2									1		
C203.2	2	3		2									2		
C203.3	1		2	1									2		
C203.4	2		2	2	1							<u> </u>	2		
C203.5	1	2		2	1								2		
C203	1.6	2.3	2.3	1.8	1								1.8		

Subject: (COMPU	JTER (ORGA	NIZA	ΓΙΟΝ					Subje	ect Coc	le:18C	S34		
Susjecti				-		Cour	se Ou	tcomes	3						
C204.1	Learn	basic (organiz	ation o	of com	puter s	ystem.				T/O 1	•			
C204.2	Analy	ze diff	erent w	ays of	comn	nunicat	ion bet	ween	process	or and	I/O de	vices.			
C204.3	Desig	n basic	memo	ry chi	p and o	lemons	trate f	unction	ning of	memoi	ry syste	em.			
C204.4	Analy	ze sim	ple arit	hmetic	c and l	ogical 1	units		. 1	1 (1		4:	atoma		
C204.5	Exam	ine Ha	rdwire	d conti	ol and	micro	progra	m con	trol and	dother	compu	iting sy	stems.		
						CO-PC)-PSO	Mappi	ng					DCO-	
~ ~						P	Os				,			PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C204.1	3	3											2		<u> </u>
C204.2	3	3											2		
C204.3	2	2	2										2		
C204.4	3	3	3										2		-
C204.5	2	1											2		
C204	2.6	2.4	2.5										2		

				men n	VIO.					Subi	ect Cod	le·18C	S35		
Subject: S	SOFTW	ARE	ENGIN	1EERI	NG					Subj	ect Cou	10.100			
						Cour	se Ou	tcomes					1,1	•	-1:-4:0
C205.1	Desig		ftware	syster	n, con	nponen	it, or	proces	s to	meet	desired	needs		in re	ansuc
C205.2						espons	ibility	•							
C205.3	Funct	ion on	multi-	discipli	nary te	eams.						•		- ua atia	
C205.4	Using	the te	chniqu	es, skil	ls, and	moder	n engi	neering	tools	necess	ary for	engine	ering j	racuc	
C205.5	Analy	ze, des	sign, in	npleme ystems	ent, ver	ify, va	lidate,	implen	nent, a	ipply, a	nd mai	ntain so	onwar		
					(CO-PO	-PSO	Mapp	ing						
	Γ					P	os							PSO _S	
Cos	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C205.1	3	2	1	2		1	2			2	1	2	2		
C205.1		2	1	2		2	1	3		1		1	1	1	
CANEA				ı 4	ŀ	_		ļ			+	 -			
C205.2	2					1	! າ	1		1 1		1 1	2	1	
C205.2 C205.3	2	2	3	2	1	1 2	2	1		1 1	-	1	2		

C205.5	3	2	1	3		1	2	1					T	
C205	2.4	2	1.6	2	1	1.4	1.0	1	1	2	2	1		
						1.4	1.6	1.6	1.2	1.5	1.5	1.6	1	

	Disci	CIC IVI	linema	tical S	tructu	res				Sub	iect C	ode:18	CS36		
C2061	1 .					Cou	ırse Oı	ıtcom	es						
C206.1	Veri pred	fy the icate lo	correct ogic an	ness of d truth	an arg	ument	using	propos	itional	of an a	rgume	nt usin	g prop	osition	al an
C206.2	Dem	onstra	te the a	bility t	o solve bility	probl	ems us	ing cou	ınting	techniq	ues an	d com	binator	ics in t	he
C206.3	Solv	e prob	lems in	volvin	T recur	ronco	relation								
C206.4	0011	ou act p	n oois t	sing diatical i	irect ni	'ດດ† ກາ	coof by	s and g	generat positic	ing fur on, proc	of of co	ontradio	ction, a	nd pro	of by
C206.5	Expl	ain and	differ	entiate	graphs	and to	ees.								
	1							Марр	ing						
Cos						CO-P(D-PSO Pos	Mapp	ing				T	PSOg	
	1	2	3	4		CO-P(D-PSO	Mapp	ing 9	10	11	12	1	PSOs	т
Cos	1 3	2 2	3 2	4 3		CO-P(O-PSO Pos			10	11	12	1	PSOs 2	3
	 	 	 	3		CO-P(O-PSO Pos			10	11	12	1 3		т
C206.1	3	2	2	3		CO-P(O-PSO Pos				11	12	1 3 2		т
C206.1 C206.2	3	2	2	3 3 2		CO-P(O-PSO Pos			10	11				
C206.1 C206.2 C206.3	3 3 2	2 3 3	2	3 3 2 2		CO-P(O-PSO Pos			1	11	1	2		
C206.1 C206.2 C206.3 C206.4	3 3 2 2	2 3 3 3	2 2 3 -	3 3 2		CO-P(O-PSO Pos				11	1 1	2		т

C207.1 Make Use of various Electronic devices like cathode ray oscilloscope, signal generators, digitariner kit, multimeter and components like resistor, capacitor, op-amp and integrated circuit. C207.2 Rate yourself in Design and demonstrate various combinational logic circuits & sequent circuits C207.3 Design and demonstrate various types of counters and Registers using Flip-flops C207.4 Make Use of simulation package to design analog and digital circuits. C207.5 Understand the working and implementation of Code converter, Adder and Subtractor. C207.5 C207.1 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3	Subject: ELECTF	RONIC	SLAB	ORAT	ORY						Sub	ject C	ode:18	CSL3	7	
Make Use of various Electronic devices like cathode ray oscilloscope, signal generators, digitariner kit, multimeter and components like resistor, capacitor, op-amp and integrated circuit. Rate yourself in Design and demonstrate various combinational logic circuits & sequent: circuits C207.3 Design and demonstrate various types of counters and Registers using Flip-flops C207.4 Make Use of simulation package to design analog and digital circuits. C207.5 Understand the working and implementation of Code converter, Adder and Subtractor. C207.6 Pos Pos PsOs C207.1 1 3 4 5 6 7 8 9 10 11 12 1 2 3 C207.2 1 3 3 4 5 6 7 8 9 10 11 12 1 2 3 C207.3 2 2 1 2 1 2 2 1 C207.4 1 3 1 2 2 2 2 1 C207.5 2 2 1 1 2 2 2 2 2 1 C207.6 1.4 3 2.2 1.5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5							Cor	irsa O	utaam						'	
Rate yourself in Design and demonstrate various combinational logic circuits & sequents	C207.1	Mak	e Use	of var	ious E	lectron	ic devi	con lile	0 0041	- 1	oscille	oscope	, signa	gene	rators.	digit
C207.3 Design and demonstrate various types of counters and Registers using Flip-flops C207.4 Make Use of simulation package to design analog and digital circuits. C207.5 Understand the working and implementation of Code converter, Adder and Subtractor. CO-PO-PSO Mapping Pos PSOs 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 C207.1 1 3 2 1 1 2 1 2 1 C207.2 1 3 2 1 2 2 1 2 1 2 1 2 2 1 2 2 1 2 2 1 2 <t< td=""><td>C207.2</td><td>Rate</td><td>yours</td><td>self in</td><td>Desig</td><td>gn and</td><td>demoi</td><td>s like instrate</td><td>esistor variou</td><td>r, capac us com</td><td>itor, or binatic</td><td>o-amp a</td><td>and inte</td><td>egrate cuits</td><td>d circui & sequ</td><td>t. uenti</td></t<>	C207.2	Rate	yours	self in	Desig	gn and	demoi	s like instrate	esistor variou	r, capac us com	itor, or binatic	o-amp a	and inte	egrate cuits	d circui & sequ	t. uenti
C207.5 Understand the working and implementation of Code converter, Adder and Subtractor. CO-PO-PSO Mapping Pos 1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 C207.1 1 3 2 1 3 1 2 1 2 1 C207.2 1 3 3 2 2 1 2 1 C207.3 2 2 1 2 2 1 C207.4 1 3 1 2 2 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2	C207.3														•	
COs Converted the working and implementation of Code converter, Adder and Subtractor. CO-PO-PSO Mapping Post Post	C207.4	Mak	e Use	of simi	lation	nackao	s types	or cou	inters a	and Reg	isters u	ısing F	lip-flo	os		
COs Pos Psos Psos	C207.5	Unde	erstand	the w	orking	and im	nlama	sign ar	nalog a	ind digi	tal circ	uits.				
COs Pos Psos Psos		<u> </u>			orking	and mi	CO DO	DCC	or Co	de conv	erter, A	Adder a	and Sul	otracto	r.	
1 2 3 4 5 6 7 8 9 10 11 12 1 2 3 C207.2 1 3 2 1 2 1 2 1 C207.3 2 2 1 2 2 2 1 C207.4 1 3 1 2 2 2 1 C207.5 2 2 2 1 1 1 2 C207 1.4 3 2.2 1.5 1 5 1 5							CO-PC	J-P50	Mapp	oing						-
C207.1 1 2 3 2 1 1 1 1 1 1 2 3 C207.2 1 3 2 1 2 1 2 1 C207.3 2 2 1 2 2 1 C207.4 1 3 1 2 2 1 C207.5 2 2 1 2 2 C207 1.4 3 2.2 1.5 1.5	COs	1	2	2	1	T	T								PSOs	
C207.2 1 3 2 1 2 1 C207.3 2 2 1 2 2 1 C207.4 1 3 1 2 2 1 C207.5 2 2 1 2 2 2 C207 1.4 3 2.2 1.5 1.5 1.5	C207 1		4	+	4	 	6	7	8	9	10	11	12	1		
C207.3 2 2 1 2 2 1 C207.4 1 3 1 2 2 1 C207.5 2 2 1 2 2 2 C207 1.4 3 2.2 1.5 1.5 1.5 1.5				-		2				1				2	1	
C207.4 1 3 1 2 2 1 C207.5 2 2 1 2 2 2 C207 1.4 3 2.2 1.5 1.5 1.5			-											2		
C207.5 2 2 1 2 1 2 2 2 C207 1.4 3 2.2 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5				 -		1				2				2	1	
C207.3 2 2 1 2 1 2 2 1 2 2 1 C207 1.4 3 2.2 1.5 1.5 1.5			3	1		2									<u> </u>	
C207 1.4 3 2.2 1.5 1.5 1.5	C207.4												1 1	4	1 Z	ı
1.5	C207.4 C207.5			2		1				1						

<u> </u>	Data Structures Laboratory	Subject Code:18CSL38
	Course Outcomes	
C208.1	Able to implement linear and nonlinear data structures and	11
C208.2	Create and analyze searching algorithm in data structures.	understand its application.
C208.3	Demonstrate data structure for solving real world problem.	
	CO-PO-PSO Mapping	ī
COs	Pos	PSOs
	1 2 3 4 5 6 7 8 6	9 10 11 12 1 2 3

1	2											1		
2	3	3	3									2		
2	2	3	3									2		
	2.5	3	3									1.75		
	2	2 3 2	2 3 3 2 2 3	2 3 3 3 2 2 3 3 3	2 3 3 3 2 2 3 3 3	2 3 3 3 2 2 3 3 3	2 3 3 3 3 2 2 3 3 3	2 3 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 2 3 3 3 2 2 2 2 2 3 2 3 2	2 3 3 3 3 2 2 3 3 3	2 3 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 3 3 3 2 2 2 2 3 3 3 2 2 2 2 3 2 3 2	2 3 3 3 2 2 3 3	2 3 3 3 2 2 3 3	2 3 3 3 2 2 2 3 3 2	2 3 3 3 2 2 2 2 3 3 2 2

Semester-IV

Subject: I	Enginee	ering N	lathem	atics-I	V					Subje	ct Cod	le: 18N	1AT4	1		
						Cour	se Out	comes								
C209.1	Use th	e conce	epts of	analytic	functi	on and	comple	x poter	itials to	solve th	ne prob	lems ar	ising in	1		
	electro	omagne	etic field	theory	/							<i>c</i>	<u> </u>			
C209.2		tilize conformal transformation and complex integral arising in aerofoil theory, fluid flow visualization and image processing														
	and im	and image processing apply discrete and continous probability distributions in analysing the probability models arising in														
C209.3	1	ngineering field.														
	engine	ering f	ield.	•	•		-1	- f:+	ماطمئن	mathor	natical	modal f	or the	ctatictic	اد-	
C209.4	1	Make use of correlation and regression analysis to fit a suitable mathematical model for the statistical														
	data.															
C209.5	Consti	ruct joii	nt prob	ability c						allalty o	rtestin	g the ny	potne			
						CO-PO		Mapp	ıng			·		DCO		
COs						P	Os				1			PSOs		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
C209.1	3	2														
C209.2	3	2													<u> </u>	
C209.3	3	2														
C209.4	3	2													<u> </u>	
C209.5	3	2													 	
C209	3	2														

Subject: 1	Design	and ar	ıalysis	of Alg	orithn	ns				Subje	ect Co	le:180	CS42		
							rse Ou								
C210.1	Analy	ze and	compa	are the	runnin	g time	of algo	orithms	using	asymp	totic a	nalysis			
C210.2	Able t	to desc	ribe an	d apply	y the m	ethod	of divi	de-and	-conqu	er and	decrea	se-and	-conqu	er	
	strate														
C210.3										edy str		paradig	m		
C210.4	Desc	ribe an	d apply	y backt	rackin	g and l	branch-	and-bo	ound ap	proach	ies.				
C210.5	Interp	ret the	effici	ent algo						lesign s	ituatio	ns, NP	, P clas	s prob	lems
					(CO-PC)-PSO	Mappi	ing						
CO-						P	Os							PSOs	T
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C210.1	2	3	3	2									2		
C210.2	2	3	3	3	2								3		
C210.3	2	3	3	3	2								2		
C210.4	2	3	2	3	2								3		
C210.5	2	3	3	2	2								2		
C210	2	3	2.8	2.6	2								2.4		

Subject:	Operating Systems	Subject Code:18CS43
	Course Outcomes	
C211.1	Demonstrate need for OS and different types of OS	

C211.2	Apply	suitabl	e techn	iques f	or man	agemer	nt of dif	ferent	resourc	es			- I MAAA	 -	
C211.3	Analy	ze Dead	dlock ch	aracter	istics a	nd prov	ide sol	ution to	deadlo	ocks. pr	ocess sy	nchror	nization	& mon	itors
C211.4	inves	tigate F	ile alloc	ation, [Disk acc	ess stra	tegies	and dif	ferent c	oncept	s of OS	in platf	orm of	usage	
	throu	chrough case studies. CO-PO-PSO Mapping													
					(CO-PC)-PSO	Mapp	ing						
COs						P	Os							PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C211.1	3	2											2		
C211.2	3	3	2	10.									2		
C211.3	2	3	3												
C211.4	2	3	3										2		
C211													2		
C211	2.5	2.75	2.66										2.0		

Subject:	Microc	ontrol	ler and	d Emb	edded	Syster	ms			Subj	ect Co	de:180	CS44			
						Cou	rse Ou	tcome	5							
C212.1	Apply knowle	the arcl edge an	hitectu id prog	ral feat rammir	ures an	d instru for diff	ictions ferent a	of ARM	microc	controll	er, by g	aining t	he			
C212.2	Exami		arious/							structio	ns with	ARM				
C212.3	Interpi embed	nterpret the basic hardware components based on the characteristics and attributes of an mbedded system with firmware design approaches.														
C212.4		Demonstrate the need of real time operating system for embedded system applications.														
								Mappi				,				
COs							Os							PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
C212.1	3	2											2		 	
C212.2		3	3	2	2								2		┼─	
C212.3	2	3	3										2			
C212.4	2	3	3													
C212	2.333	2.75	3	2	2											

Subject:	Object	Orient	ted Co	ncepts						Subj	ect Co	de:180	CS45		***************************************	
						Cou	rse Ou	tcome	S							
C213.1	Expla	in the c	bject-c	riented	conce	ots usin	g C++ a	and JAV	A							
C213.2				orogran												
C213.3	Devel	Develop computer programs to solve real world problems by using multithreading and exception nandling, event handling in Java. Develop simple GUI interfaces for a computer program to interact with users, and to understand the														
C213.4	Devel	op sim	ple GU		aces fo	r a com es using	nputer g Applet	prograr s and s	n to in wings.	teract v	with us	ers, and	to un	derstar	nd the	
	T)-PSO									
COs						P	Os							PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
C213.1	2	3	3	2									2			
C213.2	3	3	3	2	2								2			
C213.3	2	3	3	3	2	2							2			
C213.4	3	3	3	3	2								2			
C213	2.5	3	3	2.5	2	2							2			

Subject: Data Communication	Subject Code:18CS46
Course Outcomes	

C214.1	Identi	fy the o	lifferer	nt types	s of net	twork t	opolog	gies, la	yers fu	nctiona	lities, e	encodii	ng sche	mes		
	Comp	are and	l contra	ast con	versio	n techn	iques ((A/D, I	D/D), b	andwic	lth utili	ization	metho	ds and		
C214.2	types	of swit	ched n	etwork	S											
C214.3	Analy	ze erro	r detec	tion te	chniqu	ies; uno	derstan	d work	ing of	Data L	ink lay	er prot	ocois.			
C214.4	Exam	Examine MAC Protocols and Ethernet technologies Understand basics of wireless networks, internetworking principles and Internet protocols IPV4,														
C214.5		Understand basics of wireless networks, internetworking principles and Internet protocols IPV4,														
C214.3	IP6 ar	P6 and ICMP operations CO-PO-PSO Mapping														
						CO-PO	-PSO	Mapp	ing					700		
CO						P	os							PSOs		
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
C214.1	1	1											2			
C214.2	2	3											2			
C214.3	2	3											3			
C214.4	2	2											3			
C214.5	2	2											3			
C214	1.8	2.2											2.6			

Subject: I	Design	and an	alysis	of Algo	orithms	Lab				Subj	ect Co	de:18C	CSL47		
							se Ou								
C215.1	Analyz	e the ru	unning	time of	sorting	proble	ms and	able to	apply	implen	nentatio	on of de	sign tec	hniqu	es
C215.2	progra	mming	and B	acktrac	king etc	2						onquer,			
C215.3	Impler	nent a	variety	of algo	rithms :	such as	sorting	, graph	related	d proble	ems usi	ng pytho	on or jav	a lang	uage.
C215.4			compar ctures t		real w	orld pro				ply lea	ned alg	gorithms	design	techi	niques
							Os							PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C215.1	2	3	3	3	3								2		
C215.2	2	3	3	3	3								3		
C215.3	2	3	3	3	3								2		
C215.4	2	3	3	3	3								3		
C215	2	3	3	3	3								2.5		

Subject: I	Microc	ontro	ller and	Embe	edded	Systen	ns Lab	orator	\mathbf{y}	Subje	ect Coc	de:18C	SL48		
<u> </u>						Cour	se Out	comes							
C216.1															
C216.2	Exami	ine the	experime	ents on	LPC 2	148 eva	aluation	board	using er	nbedde	d C and	l keilµv	rision 4	•	
C216.3	Analy	Analyze the experiments by interfacing the hardware components using ARM instruction set.													
	CO-PO-PSO Mapping														
~~						P (Os							PSOs	· · · · · · · · · · · · · · · · · · ·
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C216.1	3		2						2	2			2		
C216.2			3		2				2				2		
C216.3	3		2						2	2			2		
C216	3		2.333		2				2	2			2		

Semester-V

Sub	ject: M&E for IT Industry	Subject Code: 18CS51

						Cou	rse Ou	itcome	S						
C301.1	Abilit	y to ma	nage pe	ople, p	rocess	es, and	resour	ces witl	nin a di	verse or	ganiza	tion. kn	owledg	e about	
	piani	ing, sta	Tring, or	ganıza	tion, er	ntrepre	neur.								•
C301.2	Demo	onstrate	an abil	ity to e	engage	in critic	al think	ing by	analyzir	ng situa	tions ar	nd cons	tructing	g and	
	selec	ling viai	oie solui	ions to	o solve	probler	ns and	to work	ceffecti	ively wit	th othe	rc			
C301.3	Apply	'ing kno	wledge	of curi	rent inf	ormatio	on, the	ories an	d mode	els tech	niaues	and nr	actices	in all of	the
	major	Dusine	ss discip	nnes i	nciuain	ig the g	eneral :	areas o	f Accou	nting ar	nd Fina	nce, Inf	ormatio	on	
	reciii	lologies	i, iviana	gemen	t, Mark	eting, a	ınd Qua	ıntitativ	e Analy	zsis.					
C301.4	Demo	nstrate	knowie	dge of	utilizir	ng the re	esource	es availa	ble eff	ectively	throug	h ERP a	ind mal	CE USE C	f IPI
	anun	istitutic	mai sup	port in	entrep	reneur	ship								
C301.5	Adop.	ting of t	he key	steps i	າ the el	aborati	on of b	usiness	idea. a	nd abou	ıt the s	mall sca	ale indu	istrias a	nd
	prepa	re the p	project r	eport.							ac ci ic 5	man see	are muc	isti ies a	Hu
														·	
					(CO-PC)-PSO	Mann	ino						
COs						CO-PC	D-PSO	Марр	ing				1	PSOg	
COs	1	2	3	4	5			Mapp		10	11	12	1	PSOs	2
COs	1 2	2	3	4		P	os		9	10	11	12	1	2	3
	 	2	3	4		6 2	os		9 2	2	11	2	1	2 2	3
C301.1	2		3	-		P 6	os		9		11	2 2		2 2 1	3
C301.1 C301.2 C301.3	2 2 2	1	3	1	5	6 2	os		9 2	2	11	2	1	2 2	3
C301.1 C301.2 C301.3 C301.4	2 2 2 2		3	1 1		6 2	os		9 2	2	11	2 2	1	2 2 1	3
C301.1 C301.2 C301.3	2 2 2		3	1	5	6 2	os		9 2	2		2 2 2	1 2	2 2 1 1	3

Subject:	Comp	uter N	etwor]	k and	Securi	ty				Subj	ect Co	de: 18	CS52		
						Cou	rse Ou	tcome	S						
C302.1	Exam	ine the	princip	les of a	pplicat	ion laye	r proto	cols.							
C302.2	Recog	gnize tr	ansport	layers	ervices	and inf	fer UDP	. TCP ni	rotocols	:					
C302.3	Analy	ze rout	er func	tionalit	v. IP ad	dressin	g and ro	outing a	lgorith	ns in ne	atwork	lavor	-		
C302.4	Explo	re vario	ous net	vork se	curity a	lgorith	ms and	analyze)	113 111 116	LVVOIK	iayer.			
C302.5	Exam	ine and	analyz	e multi	media r	network	ring con	cents							
								Mapp	inσ			-			
COs		1					Os	тарр	mg					PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C302.1	2												2		-
C302.2			2			3									<u> </u>
C302.3		2	-										3		
C302.4						-							2		
-·				3									2		
C302.5					3								3		
C302	2.0	2.0	2.0	3.0	3.0	3.0							2.4		

Subject:	Data	Base	Mana	geme	ent Sy	stems	3			Subj	ect Co	de:180	CS53		
						Cou	rse Ou	tcome	S						
C303.1	Illustr	ate the	databa	se desi	gn for a	applicat	ions			·····					
C303.2	Make	e use of ER Diagrams and Normalization techniques in DB Applications													
C303.3	Apply	oply concurrency control and recovery mechanism for data base problems													
C303.4	Apply	Apply concurrency control and recovery mechanism for data base problems Apply various concepts in Query processing.													
)-PSO	Mapp	ing						
COs				1			Os							PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C303.1	3	3												-	3
C303.2	2	3		2		3									

						 	 	 			i i
1	C303.3	3	3	3		2					
	C303.4	2	2								
	C303	2.5	2.6	3	2	2.5					

Subject: A	Automa	ta Theo	ory and	Comp	outabil	ity				Subje	ct Cod	le: 18C	S54		
Subjectivi							se Out	comes							
C304.1	Formu	late a p	roblem	with re	espect t	o diffe	rent mo	dels of	compu	tation					
C304.2	Compa	re the	differer	nt mode	els of Co	omputa	ition lik	e Detei	ministi	c, Non-o	determi	nistic a	nd Soft	ware	
	model	s (Finite	Auton	nata, PD	A and	Turing	Machin	e).	1	ممالمي		oviloda	oable a	hout	
C304.3	Design	Gramn	nars an	d Autor	nata fo	r differ	ent lan	guage (lasses a	and bec	ome kn	owledg	eable a	bout	
	restric	ted mo	dels of	Compu	tation (Keguia	r, Conte	of a pro	blom to	neir rela	al mod	el with	an em	nhasis o	on l
C304.4	Develo	p skills	in form	ial reas	oning a	ina rea	uction	ларго	piem to	aioiii	iai iiiou	el, with	arr crit	priadio	
	seman	tic pred	ision a	na conc	isenes:	to diffo	ront m	adals o	Compi	utation.					
C304.5	Formu	late a p	roblem	with r						atation.					
							-PSO	марр	ıng					PSOs	
COs						P	os			T 40	44	10	1	r	3
COS	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C304.1	2	2	1	3									2		
C304.2	2	3	2	2									2		
C304.3	2	3	2	1								2	2		
C304.4	3	2	2	2								2	2		
C304.5	2	2	2	2								2	2		ļ
C304	2.2	2.4	1.8	2								2	2		

Subject: A	Applica	tion D	evelop	ment u	sing P	ython				Subje	ect Cod	le: 18C	CS55_		
J						Cour	se Out								
C305.1	build a	nnlicat	ions									bject or			
C305.2	Regula	ar Expre	essions									sts, Dict		es and u	se ——
C305.3	Develo	op exen	nplary a	applicat	ions re	lated to	Web s	craping	g, Docur	ments a	na JSOI	V in Pytl	non.		
						CO-PC	-PSO	Mapp	ing					DGO	
						\mathbf{P}	Os							PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C305.1	2														
C305.2		2												-	
C305.3			2	2	2							1		2	
C305	2	2	2	2	2							1		2	

Subject:	Unix Prog	rammi	ing							Subje	ect Co	de:180	CS56		
J					C	ourse	Outco	mes							
C306.1	Explain U	nix Arch	itecture	, file sy	stem a	nd Bas	ic com	mands							
C306.2	Illustrate	shell pro	ogramm	ing and											
C306.3	Categoriz							alls							
C306.4	Build an a	pplicati	on/serv	ice ove											
					CO-	PO-P	SO M	apping	3					700	
						Pos								PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C306.1	1	1													
C306.2	1		2		2								1		
C306.3	1	1	1										1		

C306.4			2	2	Г	1 1		
C306	1	1	1.667	2		1	1	
				L			 	

Subject:	COMP	UIERN	ETWO	RKS LA	BORAT	ORY				Subj	ect Co	de: 18	CSL57		
		-	-		_	Cou	rse Oı	ıtcome	es						
C307.1	Analy	ze and	compa	re vario	ous netv	vorking	algorit	hms to	secure	data					
C307.2	Demo	onstrat	e the co	ncepts	of clier	nt serve	r comm	unicati	ions thr	ough co	ckat n		•		
C307.3	Analy	ze the	differer	nt parar	neters o	of netw	ork cor	figurat	ion	Jugii su	cket pr	ogram	ming.		
C307.4	Analy	ze tran	sport la	ver pro	tocols t	to evalu	late col	agostio	n in net						
C307.5	Demo	onstrate	the pe	erforma	ince of (CDMA	and CCI	Ausin	NS2/NS	work.					
C307.6	Imple	ement e	therne	tIANa	nd FSS i	n wirel	occ LAN	vi using	NSZ/NS gh simul						
	<u></u>			271114	114 233 1	CO DO	ESS LAIV	Turoug	ın sımul	ation u	sing NS	2/Ns3.			
)-PSO	Mapp	ing						
COs	1			T .	Т	P	Os							PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C307.1	2	3											1		-
C307.2	2			2											<u> </u>
C307.3		3	2	2									2		
C307.4	<u> </u>				ļ								2		
		3	2	2									2		
C307.5		2			2								2		-
C307.6		2			2										_
C307	2.0	2.2	2.0	2.0									2		
		2.2	2.0	2.0	2.0					1			1.83		i

Subject:	Data	Base	Man	ageme	ent Sy	stem	Lab			Sub	ect Co	de:18	CSL5	8	
	7					Cou	rse O	utcome	es						
C308.1	Infer	databa	se lang	uage co	mmano	ds to cr	eate sir	nole da	tahase						
C308.2	Analy	ze the	databa	se using	g querie	s to ref	rieve re	ecords	tabase						
C308.3	Apply	pl/sql	for pro	cessing	databa	Se		20143							
C308.4					design		report	and me							
C308.5	Deve	lop solu	itions u	sing da	tahase	Concen	ts for re	and me	nus.	ements					
					- Landoc 1	COLEA	DSO	Mapp	: require	ements	· · · · · · · · · · · · · · · · · · ·				
								марр	ing				_		
COs	1	1 2	1 2	· ·	T	P	Os							PSOs	
0000.4	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C308.1	3	3			3										├ ॅ
C308.2	2	3		2	3	2		1		 					┼
C308.3	2	2			2	2		3							ļ
C308.4	2	2	2	2	2	2		-	 	-					<u> </u>
C308.5	3	2	2	3	3	2		ļ — —							
C308	2.5	2.5	2	2.5	2.6	2		3							

Semester-VI

subject:	FILE STRUCTURES	Subject Code:18IS61
	Course Outc	comes
C309.1	Explain different techniques for organizing and man basic file structure concepts, file operations, second	nipulation of data in secondary storage which is all a
C309.2	Illustrate management of records and organization concepts	of files for performance by applying object-oriented
C309.3	Compare primary and secondary indexing and cons processing and sorting large files.	truct model for implementing consequential
C309.4	Construct B-trees and illustrate indexed sequential	access and prefix B+ trees with appropriate data

	struct														
C309.5	Discus	s hashi	ng and	its dem	onstrat	e collis	ion reso	olution	using d	iffering	technic	ques.			
					(CO-PO	-PSO	Mappi	ing						
60		POs												PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C309.1	1												2		
C309.2			1										2		
C309.3		3	3										2		
C309.4		3	3										2		
C309.5	1	3	3										2		
C309	1	3	2.5										2		

Subject: S	SOFTV	WARE	TEST	ING						Subje	ect Co	de: 181	S62		
						Cour	rse Ou	tcomes	S						
C310.1			_						nethods						
C310.2	Derive	e test ca	ses for	any giv	en pro	blem us	sing bla	ck box	and whi	te box 1	esting				
C310.3	Under	Understanding and apply different levels of testing													
C310.4	Identi	dentify the needs of testing process framework													
C310.5	Under	Inderstanding the need of documenting and analysis and test													
					(CO-PC)-PSO	Mapp	ing						
CO						P	Os							PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C310.1	1	1											1		
C310.2		2	2										2		
C310.3	2			1	2								2		
C310.4	1	2											2		
C310.5	1 1									1		1			
C310	1.3	1.6	2	1	2				1	1	1		1.6		

Subject:	WEB T	ECHN	OLOC	Y AN	D ITS	APPL	ICATI(ONS		Subje	ect Coo	de:180	CS63		
		11-070				Cou	rse Ou	tcome	8						
C311.1	Illusti	ate the	Semai	ntic Str	ucture	of HT	ML an	d CSS							
C311.2	Comp	ose for	rms an	d tables	s using	HTM	L and	CSS							
C311.3	Desig	Design Client-Side programs using JavaScript and Server-Side programs using PHP													
C311.4	Infer	Infer Object Oriented Programming capabilities of PHP													
C311.5	Examine JavaScript frameworks such as jQuery, JSON, XML and Backbone CO-PO-PSO Mapping														
						CO-PC)-PSO	Mapp	ing						
CO						P	Os							PSOs	,
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C311.1	3		3												
C311.2		3	3	3											
C311.3		3	3									2		2	
C311.4	1	2	2	2									2		
C311.5			2										2	2	
C311	2	2.6	2.6	2.5								2	2	2	

Subject:	Data mining and Data Warehousing	Subject Code: 18CS641							
	Course Outcomes								
C312.1	Understand the basic concepts of data mining and	data warehousing							

C312.2	Ident	ify dat	amining	proble	ms and	limplor	nont th								
C312.3	Write	assoc	iation ru	lles for	a giver	data	nent th	ie data	wareho	use					
C312.4	Descr	ibe the	e classifi	cation	and clu	storing	to ab air								,
C312.5	Choo	se betv	veen cla	ssificat	ion and	d clusto	ringsol	ques							
					.ioii aii	CO DO	Deco	ution to	or a give	en prob	lem				
CO						CO-PC		Mapp	ing						
COs	POs 1 2 3 4 5 6 7 8 0 10 11 10												PSOs		
C312.1	3			**	3	6	7	8	9	10	11	12	1	2	3
C312.2		2											2		
C312.3			3												
C312.4		2	2			2			1						
C312.5	3	2	-			2						1			
C312	3	2	2.5			2						1			
									1			1	2		

Subject:										Sub	ject Co	de: 18	CS643		
C212.1	<u> </u>					Cou	rse Ou	itcom	es				22016		
C313.1	Expl	ore th	e conce	pts and	d termi	nologie	e of al	and as		~					
C313.2	Exan	nine a	nd unde	rstand	Cloud	frama	Worls a	and to	mpuun	g					
C313.3	Ana	lyze d	ata inte	nsive o	Omput	ina	work a	na teci	inologi	es					
C313.4	Exp	lore c	loud ap	plication	ons	mg									
						CO-PC)_PSO	Many							
COs							$\frac{150}{\text{Os}}$	mapp	ung						
COS	1	2	3	4	T =									PSOs	
C313.1	2	2	-		5	6	7	8	9	10	11	12	1	2	3
C313.2	2	2	2		3								2		
C313.3	2		3		3								2		
C313.4	1	2	2		3								2		
C313	1.75		2.33	1	3								2		
COTO			1 2.00	_1_		ı			j .						

Subject:		TOU OF	V A all	u JZE	<u>r</u>					Sub	ject Co	ode:18	CS644		
C314.1	I In al.		т			Cou	irse Oi	utcom	es						
	Unde	erstand	Java Co	oncepts	like en	umerati	ons and	string	s in dev	eloning	module	7r mro.o.			
C314.2					Hamew	ORK IN C	levelon	ing mo	s in dev dular pr	Coroma	modula	ar prog	ams		
C314.3	Ond	rstand	օս աց ը	anumg	mecha	nism	згор	1110	dulai pi	ograms					
C314.4	Deve	Understand string handling mechanism Develop web applications													
C314.5	Illust	Illustrate use of database connectivity													
							DEO	N/I -							
G O						CO-PC		Mapp	oing						
COs	1	2	2	1	T =	P	os	r ———				-		PSOs	
C314.1	1	4	3	4	5	6	7	8	9	10	11	12	1	2	3
		1										-	1	4	3
C314.2	2	1	1						 				1		
C314.3		2	1	1									1		
C314.4		2	2		2								1		
C314.5		2	2						2				2		
C314	1.5				2				2				2		
	1 %	1.6	1.5	1	2				2				had	i	

Subject:	MOBILE APPLICATION DEVELOPMENT	
	Course Outcomes	Subject Code: 18CS651
C315.1	Create, test and debug Android application by setting	
C315.2	Create, test and debug Android application by setting up A Implement adaptive, responsive user interfaces that work as	ndroid development environment
		cross a wide range of devices

C315.3	Demoi	nstrate l	now to	get inte	rnet cor	nectivi	ity, lear	ning to	manag	e tasks	and sen	ding no	tification	ons	
C315.4	Demoi	nstratin	g metho	ods in s	toring,	sharing	and ret	rieving	data in	androi	d applic	ations.			
C315.5	Analy	ze perfo	rmance	of and	roid ap	plicatio	ns and	underst	and the	role of	permis	sions a	nd secu	rity and	
	Publis	Publishing android application in real world													
		CO-PO-PSO Mapping POs PSOs													
		POs													
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C315.1	2		3		2				2	2			2		
C315.2	2		3		2				2				2		
C315.3	1		1		2				1				2		
C315.4	2		3		2				2	2			2		
C315.5	2	2	3	2	2								2		
C315	1	2	3	2	2								2	2	

Subject:	PROGR	AMM	ING IN	JAVA						Subje	ect Coc	le: 18C	S653		
<u> </u>						Cour	se Out	comes		·					
C316.1						ts using									
C316.2	Develo	p comp	outer p	rogram	s to sol	ve real v	world p	roblem	s in C+	+.					
C316.3	Develo	p com	outer p	rogram	s to sol	ve real	world p	roblem	is by us	ing mul	tithrea	ding and	dexcep	otion	
	handli	ng, eve	nt hand	lling in	Java.										1.1
C316.4										ract wit	th users	s, and t	o uno	ierstan	d the
	event-	based (GUI har	idling p	rinciple	s using	Applet	s and s	wings.						
					(CO-PO	-PSO	Mapp	ing						
~~						PO	Os				***			PSOs	
COs	1	2	3	4	5	6	7	0	Λ	10	11	احما	-		
	1 1	2	3	4	כ	6	/	8	9	10	11	12	1	2	3
C316.1	2	3	3	2	3	O	/	8	9	10	11	12	1	2	3
C316.1 C316.2	2 3				2	0	/	8	9	10	11	12	1	2	3
		3	3	2		2	/	8	9	10	11	12	1	2	3
C316.2	3	3	3	2 2	2		1	8	9	10	11	12	1	2	3

Subject: S	SOFT	WARE	TES	ΓING	LABO	DRAT	ORY			Subje	ect Co	de:18I	SL66		
<u> </u>						Cor	urse O	utcom	es						
C317.1	List o	ut the	require	ements	for th	e give	n prob	lem							
C317.2	Desig	n and	implen	nent th	e solu	tion fo	r giver	n prob	lem in	any pr	ogram	ming l	anguag	ge	
C317.3		Apply the appropriate technique for the design test cases													
C317.4		Derive test cases for any given problem													
C317.5	Creat	Create appropriate document for test cases CO-PO-PSO Mapping													
						CO-P	O-PS	O Map	ping				1		
CO						P	Os					r		PSO	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C317.1	1	2											1		
C317.2		2	3	2									2		
C317.3			3	1									2		
C317.4		1	2	1									2		
C317.5									1	1	1		1		
C317	1	1.6	2.6	1.3					1	1	1		1.6		

Subject: File Structures Laboratory with mini project	Subject Code:18ISL67
Course Outcomes	

C318.1	Imple	ement o	differer	ıt data	organi	zation	and ma	nipula	tion ted	hnique	es on fi	les	****		
C318.2									essing f				t in file	·	
C318.3									hnique						
						CO-P									
COs		_				Pe	Os							PSO	<u> </u>
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C318.1		1	2		2								2		
C318.2		1	2		2								2		
C318.3		1	2		2				2	2	1	1	2		
C318		1	2		2				2	2	1	1	2		

Subject:	Mobile	Applic	cation I	Develop	ment					Subj	ect Co	de:180	CSMP	58		
						Cou	rse Ou	tcome	S							
C319.1	Creat	e, test a	and deb	ug And	lroid ap	plicatio	n by se	tting up	Andro	id deve	lopmer	t envir	onment			
C319.2	Imple	ment a	daptive	, respo	nsive u	ser inte	rfaces t	hat wo	rk acros	s a wid	e range	of dev	ices.		-	
C319.3																
C319.4	Infer	monstrate methods in storing, sharing and retrieving data in Android applications. er the role of permissions and security for Android applications. CO-PO-PSO Mapping														
COs		CO-PO-PSO Mapping POs PSOs														
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
C319.1	3	2	2		2	1			1	1		1				
C319.2	3	2	2		2	1			1	1		1				
C319.3	3	2	2		2	1			1	1.		1				
C319.4	3	2	2					2	1	1		1				
C319	3	2	2		2	1		2	1	1		1				

Semester-VII

Subject:	Artific	cial Int	elligen	ce &N	Iachin	e Lear	ning			Subj	ect Co	de:180	CS71		
						Cou	rse Ou	tcome	S						
C401.1	Unde types		ng the t	heory o	of Artifi	cial Inte	elligenc	e(AI) an	d basic	concep	ts of m	achine	learnin	g(ML) a	nd i
C401.2	Identi	ify optir	nal tecl	nniques	suitab	le for a	given p	roblem	•						
C401.3		ate Al a					<u> </u>				· · · · · · · · · · · · · · · · · · ·				
C401.4		machir					ds real	world d	ata ana	alvsis.					
C401.5		n an ap								.,					
								Mapp	ing						
COs							Os							PSOs	
COS	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C401.1	3	3										1	2		\vdash
C401.2		2			2								2		
C401.3	2												1		
C401.4	2	2			2							2	2		\vdash
C401.5			3	1								1	1		
C401	2.33	2.33	3	1	2							1.5	1.6		

Subject: BIG DATA AND ANALYTICS	Subject Code:18CS72
Course Outcome	es

C402.1	Unders	stand fu	ndamer	ntals of	Big Da	ta anal	ytics									
C402.2	Investi	gate Ha	doop fi	ramewo	ork and	Hadoo	p Distri	buted F	ile syst	em						
C402.3	Illustra	ate the c	concept	s of No	SQL us	ing Mo	ongoDE	and Ca	assandr	a for Bi	g Data					
C402.4			-							data al						
C402.5		Use machine learning algorithms for Big Data Analytics, Web Mining and Social Network Analysis with relevant visualization tools CO-PO-PSO Mapping														
	CO-PO-PSO Mapping															
CO	CO-PO-PSO Mapping POs PSOs															
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
C402.1		2														
C402.2		2			1							į	1			
C402.3		2														
C402.4		1			2											
C402.5		2		1	2								1			
C402		1.8		1	1.6								1			

Subject:	USER	INTE	RFACI	E DES	IGN					Subje	ect Co	de:18C	S734		
						Cou	rse Ou	tcome	S						
C403.1	Chara	cterize	and di	fferent	tiate th	e User	Interfa	ace prin	nciples	and de	sign st	andard	S		
C403.2	Desig	n the n	nenu cr	eation	and na	avigatio	ons.								
C403.3		esign the windows creation and analyze operations. nalyze and Establish connection between various screen based controls.													
C403.4	Analy	ze and	l Establ	ish co	nnectio	on betw	veen va	arious s	screen l	pased c	ontrols	S			
	<u> </u>				(CO-PC)-PSO	Mapp	ing						
	CO-PO-PSO Mapping POs PSO														
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C403.1	2		2										2		
C403.2			3	***************************************									2		į.
C403.3			3										2		
C403.4		3											2		
C403	2.0	3.0	2.77										2.0		

Subject:	NATU	JRAL	LAN	GUA	GE P	ROC	CESSI	NG		Subje	ect Co	de:18C	S743		
							rse Ou								
C404.1	Apply	the na	atural la	anguag	ge text	at wor	d level	and sy	ntactic	structu	ires to	develop	simp	le and	
			olicatio												
C404.2	Analy	ze the	natura	l langu	age tex	t at w	ord lev	el and	syntact	ic struc	ctures.				
C404.3	Ident	Analyze the natural language text at word level and syntactic structures. Identify the concepts of Text mining.													
C404.4	Apply	y infori	nation	retriev	al tech	niques	to dev	elop a	pplicati	ions.					
	1 11)-PSO								
						P	Os							PSOs	
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C404.1	2	2											2		

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2	2	2										2		
		-			İ							_		
2	2	2										2		 -
3	2													
												2		
2.25	2.25	2										2	 	
	2 3	2 2	2 2 2 2 2 2 3 3	2 2 2 2 2 2 3 3	2 2 2 2 2 2 3 3	2 2 2 2 3 3 3 S	2 2 2 2 3 3 3 S	2 2 2 2 3 3 3 S S S S S S S S S S S S S	2 2 2 2 3 3	2 2 2 2 3 3	2 2 2 2 3 3	2 2 2 2 3 3	2 2 2 2 2 2 3 3	2 2 2 2 3 3

Subject:	Crypt	tograph	ıy							Subi	ect Co	de:18	^S744		
						Cou	rse Ou	ıtcome	25	1 3					
C405.1	Disc	uss cry	ptogra	aphy a	nd its)nc					
C405.2	Desi	gn and	develo	p simp	le crvi	ntogran	hic alo	orithm	piicati	,115.					
C405.3	Disc	uss Ellip	tic curv	es and	RSA.	otograp	mo aig	OTTUIII							
C405.4		ussion of				uthenti	cation								
C405.5		uss X.50													
						CO-PO	D-PSO	Mann	ina						
					***		Os	mapp	ung				T	DCC	
COs	1	2	3	4	T =	T			T	T				PSOs	
C405.1	2	1	<u> </u>	4	5	6	7	8	9	10	11	12	1	2	3
	-	 				1							1		
C405.2	2	2				1									
	_					1							2		
C405.3	2	2				1							2		
C405.4	2	2		1		1									
C405.5								2					1		
C405	2	1.75		1		1						2	1		
		1.75		1		<u> </u>	<u> </u>	2				_ 2	1.4]

Subject:	Ma	chine	Learni	ing						Subi	ect Co	de:180	CSL76		
							rse Ou								
C406.1	Explo	ore var IL algi	ious py	ython l	ibraries	s usefu	l for re	al time	applic	ation a	nd app	ly appr	opriate	e data s	ets to
C406.2	Unde algor	rstand ithms	the im	plemer	ntation	proced	lure for	r the m	achine	learnir	g and	artificia	al intel	ligence	
C406.3	Ident	ify,app	oly and	evalua	te ML	algorit	thms to	solve	real wo	orld pro	blems				
	T)-PSO								
COs						P	Os					· · · · · · · · · · · · · · · · · · ·		PSOs	
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C406.1	2			3									2		
C406.2	2	2											2		
C406.3	1	2	2	2	2										
C406	1.66	2	2	2.5	2								2		

Semester-VIII

Subject: IOT	Subject Code:18CS81
Course Outcomes	

C407.1										leading						
C407.2	Comp	are and	dcontra	ast the	deploy	ment o	of smar	rt objec	ts and	the tec	hnolog	ies to c	onnec	t them	to	
	netwo															
C407.3	Appra	ise the	role o	f IoT p	rotoco	ls for e	fficien	t netwo	ork con	nmunio	cation.					
C407.4	1	rate the														
C407.5	Illustr	ate dif	ferent s	sensor	techno	logies	for sen	sing re	al wor	ld entit	ies and	identi	fy the	applica	tions	
	Illustrate different sensor technologies for sensing real world entities and identify the applications of IoT in Industry. CO-PO-PSO Mapping															
	d.,				(CO-PO	-PSO	Mapp	ing							
CO		POs PSOs														
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	
C407.1	3	2	2	2	1	3										
C407.2	2	2		2		2										
C407.3	1	3	3	1		1										
C407.4	1	2	2	1	2	1										
C407.5	2	1	3	2		2										
C407	2.7	2.8	2.6	2.7	2.9	2.7			<u></u>							

Subject:	SAN									Subje	ect Cod	le:180	CS822	1	
						Cour	se Ou	tcomes							
C408.1	Identify key challenges in managing information and analyze different storage networking														
	techn	technologies and virtualization													
C408.2	Explain components and the implementation of NAS														
C408.3	Describe CAS architecture and types of archives and forms of virtualization														
C408.4									activiti						
C408.5	Analy	ze the	compo	nents	of clou	d comp	outing	showin	g how	busine	ss agili	ity in a	n orgai	nizatio	n can
	be cre														
					(CO-PO	-PSO	Mappi	ing						
	POs														
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C408.1	2	2	2										2		
C408.2				2					1		1		1		
				-											
C408.3					2							1	1		
C408.4											1		2		
C408.5						1	1	1					2		
C408	2	2	2	2	2	1	1	1	1		1	1	1.6		

Subject:	NoSQL Database	Subject Code:18CS823
	Course Outco	omes
C409.1	Introduce to NoSQL, Learning Basics and comparison use the four types of NoSQL Databases (Document-Graph databases).	oriented, Key Value Pairs, Column-oriented and
C409.2	Explain the Distribution Models and data replication	
C409.3	Illustrate the Map Reduce processing technique and	
C409.4	Explain the detailed architecture, define objects, load oriented NoSQL databases	d data, query data and performance tune Document-

C409.5	Under	rstandin	g of Gi	aph da	tabase a	nd data	model	s.							
								Mapp	ing			7			777
COs		PSOs													
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C409.1	1	1			1							1	-		-
C409.2	2	1	1		2							1	1		
C409.3	1	2	1		1							2			ļ
C409.4	2	1	1		1							1	1		
C409.5	1	1	1		1							1	1		
C409	1.4	1.2	1		1.2							1.2	1		

Subject:	INTE	RNSH	IP/ PR	ROFES	SION	AL PR	ACTI	CE		Subj	ect Co	de:18	CS18:	5			
						Cou	rse Oi	ıtcome	S			***************************************					
C410.1	Apply	domai	n know	/ledge ir	propo	sing so	lution f	or IT pr	oblem.		***						
C410.2										SOURCE	s and co	ntomn	oranyt	a als an	<u>ــــــــ</u>		
	delive	Develop/implement the design with appropriate techniques, resources and contemporary tools and deliver solution with stipulated planning.															
C410.3		Make the graduates work in collaboration/multidisciplinary environment.															
C410.4	Const	ruct an	integri	ty and e	ethical	behavio	or durin	g prepa	ration	of Tech	nical						
C410.5	Discu		nake fo	ormal ar				cations	with gu	ide, ma	ike pres	sentatio	ons and	prepar	e		
						CO-PC)-PSO	Mapp	ing								
COs							Os							PSOs	PSOs		
	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3		
C410.1	3	2	3										3		-		
C410.2	2	2		3									2				
C410.3	1			2					2				1				
C410.4	2			2	2				-				2				
C410.5	2							2				2	1				
C410	2	2	3	2.33	2			2	2		 	2	1.8				

Subject:	PROJ.	ECT V	VORK	II						Subj	ect Co	de:18I	SP85		
						Cou	rse Ou	ıtcome	S						
C411.1	Disco	Discover Potential research areas in the field of IT.													
C411.2	Conduct a Survey of Several available literature in the preferred field of study.														
C411.3	Comp	are and	contra	st the	several	existing	z solutio	ons for	researc	h challe	nge				
C411.4	Demo	nstrate	an abi	lity to v	vork in	teams a	and mai	nage th	e condu	ict of th	e reces	rch ctu	du		
C411.5	Form	ulate ar	nd purp	ose a p	lan for	creating	a solu	tion for	the res	earch r	lan ido	ntified	and to	ron out	
	prese	nt the f	indings	of the	study c	onduct	ed in th	e prefe	rred do	main	nan iue	nunea	and to	report	and
	·)-PSO								
COs					•		Os	тирр	<u>s</u>				1	PSOs	
COS	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C411.1	3	2	2	2							2	2	2		
C411.2		3										-			
	2	, ,	2	1	1						1	1	2		
C411.3	3	3	3	1	2						2	1	3		

C411.4	2	2	3					1	1	2	
C411.5	2	3	3	1				2	2	2	
C411	2.4	2.6	2.6	1.25	1.5			1.6	1.4	2.2	

Subject:	TECH	NICAI	SEM	INAR						Subje	ct Coc	le:18IS	SS86		
						Cour	rse Ou	tcomes							
C412.1	Identify and Analyze information about emerging technologies with respect to current trends.														
C412.2	Identify promising new directions of various cutting edge technologies with intrapersonal skills.														
C412.3	Communicate effectively to a diverse audience, exhibit effective communication skills.														
C412.4	Understand appropriate modern engineering and IT Tools in new innovations and inventions.														
C412.5	Develop technique by imparting skills in preparing detailed report and describing the topic along with													1	
	results	5			en e										
					(CO-PC)-PSO	Mappi	ing						
CO.	POs														
COs	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3
C412.1	1	2		1					2			3	2		
C412.2	1	2		1					2			3	2		
C412.3	1	2		1					2	3		3	2		
C412.4	1	2		1					2			3	2		
C412.5	1	2		1					2			3	2		
C412	1	2		1					2	3		3	2		

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