BRANG	CH:		ECE /B.Tech II			SESSION:	2022-23	
COUR	SE:	B.TECH- ECE	YEAR:	II		SEMESTER:	III	
SUBJE	CT:	Networks a	nalysis and synthesis		SUB	JECT CODE:	BEET-305	
			COURSE OUTCO	OMES (CO)				
CO #			CO STA	ATEMENT				
BEET 305.1	Apply ne	twork topology concepts to the form	nulation and resolution	on of electrical network iss	ues.			
BEET 305.2	Determir	e the attributes and traits of networ	k functions and conf	irm the mathematical limit	tations fo	or their practical in	nplementation.	
BEET 305.3	Synthesi	ize passive two-port networks filt	ers using standard I	Foster and Cauer forms.				
BEET 305.4	Apply th	ne concept of Laplace and Fourier	transforms in elect	trical network problems.				
BEET 305.5	5.5 To analyze the behaviour of the circuit in different domains.							
BRAN	CH: ECE /B.Tech III			SESSION:	2022-23			
COUR	SE:	B.TECH- ECE	YEAR:	III		SEMESTER:	v	
SUBJE	CT:	Microprocessor and and Interfacing SU			SUB	JECT CODE:	BECT-501	
	COURSE OUTCOMES (CO)							
CO #			CO ST	ATEMENT				
BECT501.1	Apply mi	croprocessor techniques to solve p	roblems.					
BECT501.2	Analyze	8086 microprocessor for a given pro	oblem.					
BECT501.3	Examine	8085 and 8086 microprocessor us	ing assembly langua	ige programs.				
BECT501.4	Impleme	nt assembly language program in 8	086 microprocessor	· · · ·				
BECT501.5	Design s	mall circuits using 8051 microcontro	oller.					
BRAN	CH:		ECE /B.Tech III			SESSION:	2022-23	
COUR	SE:	B.TECH- ECE	YEAR:			SEMESTER:	V	
SUBJE	CT:	Microprocessor	and and Interfacin	g Lab	SUB	JECT CODE:	BECP-501	
			COURSE OUTCO	MES (CO)				
			<u>COST</u>	ATEMENT				
BECP 501.1	Analyze	8085 and 8086 kits used in writing p	orograms of micropro	ocesor.				
BECP 501.2	Fxamine	multiplication and division of 16 bit	numbers using 808	5 and 8086 microprocesso	or			
BECP 501.4	Impleme	nt assembly language program in 8	086 microprocessor					

BECP 501.5	Analyze	interfacing of 8086 microprocessor	with LED.						
BRANG	CH:		ECE /B.Tech IV			SESSION:	2022-23		
COURS	SE:	B.TECH- ECE	YEAR:	IV		SEMESTER:	VII		
SUBJE	CT:	Digital li	mage Processing		SUB	JECT CODE:	BECT-703(B)		
			COURSE OUTCOM	NES (CO)					
CO #			CO STA	TEMENT					
BECT703.1	Analyze	steps used in Digital Image process	sing.						
BECT703.2	Determir	ne Histogram Processing and different	ent types of filters used	d in image processing.					
BECT703.3	BECT703.3 Illustrate Filtering methods and morphological processing.								
BECT703.4 Analyze Segmentation in point, line, and edge.									
BECT703.5	BECT703.5 Examine Video coding and video segmentation in Image Processing.								
BRANG	CH:		ECE /B.Tech II			SESSION:	2022-23		
COUR	SE:	B.TECH- ECE	YEAR:	II		SEMESTER:	III		
SUBJE	CT:	VISI tec	hnology & Design		SUB	JECT CODE:	BECT-503		
			COURSE OUTCON	AES (CO)					
CO #			CO STA	TEMENT					
BECT 503.1	Apply the	e concept of VLSI technology to solv	ve the problems.						
BECT 503.2	Determi	ne the IC abrication process.							
BECT 503.3	Analyze	the loiw power VLSI circuits.							
BECT 503.4	Implem	ent CMOS techniques to solve the	e problems						
BECT 503.5	Design	VLSI circuits using tools.							
BRAN	CH:		ECE /B.Tech			SESSION:	2022-23		
COUR	SE:	B.TECH- ECE	YEAR:	I		SEMESTER:	III		
SUBJE	CT:	Elect	ronics Devices		SUB	JECT CODE:	BECT-304		
CO #			CO STA	TEMENT					
BECT 204 1	Illustrate	various characteristics of a semicor	aductor						
DECT 304.1		Valious characterstics of a serificor							
BECT 304.3	Examine	the various application of diode							
BECT 304.4	Analyze	various transistor configuration							
BECT 304.5	Assess	various parameter and characterstic	s of Field effect transis	stor					

BRAN	CH:		ECE /B.Tech			SESSION:	2022-23	
COUR	SE:	B.TECH- ECE	YEAR:	I		SEMESTER:	III	
SUBJE	CT:	Electror	nics Devices Lab		SUB	JECT CODE:	BECP-304	
		C	COURSE OUTC	COMES (CO)				
CO #			CO S	STATEMENT				
BECP 304.1 Examine the various lab equipment and components needed in electronics								
BECP 304.2 Conduct performance characterstics curve of various diode								
BECP 304.3 Analyze the input and output characteristics and H parameter oF BJT								
BECP 304.4	Identify N	Magnitude vs frequency curve and m	neasure bandwidtl	n in FET				
BECP 304.5	Impleme	nt various electronics circuit in brea	dboard					
BRAN	CH:	ECE /B.Tech II				SESSION:	2022-23	
COUR	SE:	B.TECH	YEAR:	<u> </u>		SEMESTER:	III	
SUBJE	CT:	Electronic measu	rement & instrun	nantation	SUB	JECT CODE:	BECT-302	
	1		COURSE OUT	COMES (CO)				
CO #			CO S	STATEMENT				
BECT302.1	Apply the	e performance characteristics of eac	ch instrument.					
BECT302.2	Demons	trate basic meters such as voltmete	rs and ammeters	and Distinguish various types	of bric	lge based on quali	ity factor	
BECT302.3	Apply the	e complete knowledge of various ele	ectronics instrume	nts/transducers to measure th	e phy	sical quantities in t	he field of science	
BECT302.4	Compute	e the basic features of oscilloscope	and distinguish be	tween various types of oscillos	scope	5		
BECT302.5	Evaluate	the many kinds of signal analyzers						
BRAN	CH:		ECE /B.Tech II			SESSION:	2022-23	
COUR	SE:	B.TECH	YEAR:			SEMESTER:		
SUBJE	CT:	Electronic measure	ment & instruma		SUB	JECT CODE:	BECP-302	
CO #								
BECB302 1	Analyze	the performance characteristics of a	ach instrument					
BECP302.2	Demons	trate basic meters such as voltmete	rs and ammeters	and Distinguish various types	of bric	lge based on quali	ity factor	
BECP302.3	Apply tra	insducers for the measurement of p	hvsical quantities	like temperature, pressure, dis	stance	and displacemen	t	
BECP302.4	Compute	e the basic features of oscilloscope	and distinguish be	tween various types of oscillos	scope	<u> </u>		
BECP302.5	Categori	ze the many kinds of signal analyze	rs					
BRAN	CH:		EEE /B.Tech II			SESSION:	2022-23	

COUR	SE:	B.TECH	YEAR:	IV		SEMESTER:	VII
SUBJE	CT:	MICROWA	VE ENGINEERIN	IG	SUB	JECT CODE:	BECT-701
			COURSE OUTO	COMES (CO)			
CO #			CO S	STATEMENT			
BECT701.1	Analyze	different active and passive microwa	ave components.				
BECT701.2	Demons	trate the propagation through wave	guide and examine	e the power transmission lo	sses.		
BECT701.3	Apply the	e formulation and properties for proc	cedure to measure	e different parameters like V	/SWR, in	npedance, frequer	ncy and attenuatio
BECT701.4	Classify	the characteristics of different micro	wave devices for	practical applications.			
BECT701.5 Point out the principle of operation and its performance characteristics and application of microwave tubes.							
BRAN	CH:	H: EEE /B.Tech II SESSION:				2022-23	
COUR	SE:	B.TECH	YEAR:	IV		SEMESTER:	VII
SUBJE	CT:	MICROWAVE ENGINEERING LAB SUBJECT CODE: BECP-701					
CO #				STATEMENT			
BECP701.1	ldentifv t	he working of microwave test bench	and its different of	components.			
BECP701.2	Examine	e different microwave parameters ind	cluding guide wave	elength, VSWR, unknown ir	npedanc	e and reflection co	pefficient.
BECP701.3	Analyze	the characteristics of Gunn diode ar	nd the output powe	er obtained.			
BECP701.4	Sketch t	he characteristics of simple microwa	ave circuits like co	uplers, power dividers and I	nybrid rin	ıg.	
BECP701.5	Analyze	the square wave modulation of Micr	owave signal usin	g PIN diode			
BRAN	CH:		EEE /B.Tech II	P		SESSION:	2022-23
COUR	SE:	B.TECH	YEAR:			SEMESTER:	v
SUBJE	CT:	COMPUTER SY	STEM ORGANIS	SATION	SUB	JECT CODE:	BOEC 505(B)
			COURSE OUT	COMES (CO)			
CO #			CO 9	STATEMENT			
BOEC505B.1	Identify b	pasic instructions sets to solve real l	ife problems.				
BOEC505B.2	Classify	different memory organization.					
BOEC505B.3	Understa	and the interfacing of external device	e with computer				
BOEC505B.4	Apply alo	gorithms for ALU design.					
BOEC505B.5	Apply the	e knowledge of micro-operations to	design modules o	f control unit.			
BRAN	CH:		ECE /B.Tech			SESSION:	2022-23
COUR	SE:	B.TECH- ECE	YEAR:			SEMESTER:	V

SUBJE	CT:	Electroma	gnetic Field Theo	ry	SUB	JECT CODE:	BECT-502			
			COURSE OUTC	OMES (CO)						
CO #			CO 8	STATEMENT						
BECT 502.1	Underst	and the depth of static and time vary	ring electromagnet	ic field as governed by Max	well's ea	uations.				
BECT 502.2	BECT 502.2 Illustrate the applications of strokes and divergence theorem									
BECT 502.3 Examine the characteristics of guided waves betwwen parallel plane and rectangular waveguide										
BECT 502.4 Analyze uniform plane wave propagation in different medium										
BECI 502.5 [Apply smith chart for solution of transmission line problems and impedance matching										
BRANC	CH:		ECE /B.Tech			SESSION:	2022-23			
COURS	SE:	B.TECH- ECE	YEAR:			SEMESTER:	<u> </u>			
SUBJE	CT:	Electromagn	etic Field Theory	Lab	SUB	JECT CODE:	BECP-502			
			COURSE OUTC	OMES (CO)						
CO #			CO S	TATEMENT						
BECP 502.1	Different	tiate different field pattern of various	modes in wavegui	des.						
BECP 502.2	Explain	the effect of dielectric properties of r	naterial in transmis	sion line						
BECP 502.3	Impleme	ent various types of transmission line	es on microwave fr	equency.						
BECP 502.4	Impleme	ent various types of microwave devic	es like Coupler, po	ower divider, filters etc.						
BECP 502.5	Analyze	the VSWR, return loss, current distr	ibution obtained fro	om simulation.						
BRANC	CH:		EEE /B.Tech IV			SESSION:	2022-23			
COURS	SE:	B.TECH- EEE	YEAR:	IV		SEMESTER:	VII			
SUBJE	CT:	Artificia	Neural Network		SUB	JECT CODE:	BOEC 704 (C)			
			COURSE OUTC	OMES (CO)			, , , , , , , , , , , , , , , , , , ,			
CO ‡	#		С	O STATEMENT						
BOEC 704	(C).1	Demonstrate the basic concepts of	neural networks.							
BOEC 704	(C).2	Apply various learning algorithms to	o train neural netwo	orks efficiently.						
BOEC 704	(C).3	Analyze the applicability of different	learning technique	es in various problem doma	ains.					
BOEC 704	(C).4	Evaluate the performance and suita	ability of advanced	neural network models.						
BOEC 704	(C).5	Demonstrate the design and impler	nentation of neural	network architectures for	practical	applications				
BRANC	CH:		ECE			SESSION:	2022-23			
COURS	SE:	B.TECH	YEAR:			SEMESTER:				
SUBJE	CT:	Digit	al Electronics		SUB	JECT CODE:	BECT-303			
			COURSE OUTC	OMES (CO)						
CO #			CO S	TATEMENT						
BECT303.1	Compre	hend and analyze digital logic circuit	,binary codes,num	ber system and different t	/pes of n	ninimization meth	ods.			

BECT303.2	Analyze	303.2 Analyze the characteristics of logic families and semiconductor memories. Compare their performance in terms of performance metric								
BECT303.3	Analyze	digital systems for their performance	e, timing character	istics, and hazards.						
BECT303.4	Design &	k implement combinational logic circ	uits for specific fu	nctions, such as adders, su	ubtractors	, multiplexers, and	d decoders.			
BECT303.5	Design &	k implement sequential logic circuits,	, including flip-flop	s, counters, registers, and	state ma	chines.				
BRAN	CH:		ECE			SESSION:	2022-23			
COUR	SE:	B.TECH	YEAR:			SEMESTER:	III			
SUBJE	CT:	Digital I	Electronics Lab		SUB	JECT CODE:	BECP-303			
COURSE OUTCOMES (CO)										
CO #	CO STATEMENT									
BECP303.1	Apply the	e basics of digital electronics.								
BECP303.2	Verify the	e truth table of different logic gates u	ising ICs							
BECP303.3	Design c	ombinational logic circuits using har	dware & software							
BECP303.4	Design s	equential logic circuits using hardwa	are & software.							
BECP303.5	Acquire	skills of team work, technical commu	unication and effe	ctive report writing.	1		1			
BRAN	CH:	ECE /B.Tech III SESSION: 2022-23								
COUR	SE:	B.TECH- ECE YEAR: III SEMESTER: V								
	OT	DCN SUBJECT CODE: BECT-504(B)								
SUBJE			DCN		SUB	JECT CODE:	BECT-504(B)			
SUBJE		C		OMES (CO)	SUB	JECT CODE:	BECT-504(B)			
SUBJE		C	DCN COURSE OUTO CO S	OMES (CO)	SUB	JECT CODE:	BECT-504(B)			
CO # BECT504.1	Understa	anding of fundamental networking co	DCN COURSE OUTO CO S oncepts, including	OMES (CO) TATEMENT protocols, architectures, to	SUB	JECT CODE: and technologies	BECT-504(B)			
SUBJE CO # BECT504.1 BECT504.2	Understa Design a	anding of fundamental networking co and implement computer networks, c	DCN OURSE OUTO CO S oncepts, including considering factors	OMES (CO) TATEMENT protocols, architectures, to s such as scalability, perfor	SUB pologies, mance, s	JECT CODE: and technologies ecurity, and reliab	BECT-504(B)			
SUBJE CO # BECT504.1 BECT504.2 BECT504.3	Understa Design a Configur	anding of fundamental networking co and implement computer networks, c e and manage network devices such	DCN COURSE OUTO CO S oncepts, including considering factors h as routers, switc	COMES (CO) TATEMENT protocols, architectures, to s such as scalability, perfor hes, firewalls, and access	SUB pologies, mance, s points to	JECT CODE: and technologies ecurity, and reliab support network c	BECT-504(B)			
SUBJE CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4	Understa Design a Configur Analyze	anding of fundamental networking co and implement computer networks, co e and manage network devices such issues of routing and congestion me	DCN OURSE OUTO CO S oncepts, including considering factors h as routers, switc echanism for indep	COMES (CO) TATEMENT protocols, architectures, to s such as scalability, perfor hes, firewalls, and access pendent and internetworkin	SUB pologies, mance, s points to g network	JECT CODE: and technologies ecurity, and reliab support network of (s for wired and w	BECT-504(B) ility. communication eff ireless link.			
SUBJE CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4 BECT504.5	Understa Design a Configur Analyze Analyze	anding of fundamental networking co and implement computer networks, co e and manage network devices such issues of routing and congestion me internal workings of the Internet and	DCN COURSE OUTO COS oncepts, including considering factors h as routers, switc echanism for indep of a number of co	COMES (CO) TATEMENT protocols, architectures, to s such as scalability, perforn hes, firewalls, and access bendent and internetworkin ommon Internet application	SUB pologies, mance, s points to g network s and pro	JECT CODE: and technologies ecurity, and reliab support network of (s for wired and w ptocols(DNS, SMT	BECT-504(B) ility. communication eff ireless link. 'P, FTP, HTTP, W			
SUBJE CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4 BECT504.5 BRANG	Understa Design a Configur Analyze Analyze CH:	anding of fundamental networking co and implement computer networks, co e and manage network devices such issues of routing and congestion me internal workings of the Internet and	DCN OURSE OUTO COS oncepts, including considering factors h as routers, switc echanism for indep of a number of co ECE /B.Tech VII	COMES (CO) TATEMENT protocols, architectures, to s such as scalability, perfor hes, firewalls, and access pendent and internetworkin ommon Internet application	SUB pologies, mance, s points to g network s and pro	and technologies ecurity, and reliab support network of (s for wired and w ptocols(DNS, SMT SESSION:	BECT-504(B) ility. communication eff ireless link. P, FTP, HTTP, W 2022-23			
SUBJE CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4 BECT504.5 BRANG COUR3	Understa Design a Configur Analyze Analyze CH: SE:	anding of fundamental networking co and implement computer networks, co e and manage network devices such issues of routing and congestion me internal workings of the Internet and B.TECH- ECE	DCN COURSE OUTO CO S oncepts, including considering factors h as routers, switc echanism for indep of a number of co ECE /B.Tech VII YEAR:	COMES (CO) TATEMENT protocols, architectures, to a such as scalability, perforn hes, firewalls, and access bendent and internetworking protocols, architectures, to a such as scalability, perforn hes, firewalls, and access bendent and internetworking bendent and internetworking bendt and interne	SUB pologies, mance, s points to g network s and pro	and technologies ecurity, and reliab support network c s for wired and w btocols(DNS, SMT SESSION: SEMESTER:	BECT-504(B) ility. communication eff ireless link. P, FTP, HTTP, W 2022-23 VII			
CO # BECT504.1 BECT504.2 BECT504.3 BECT504.3 BECT504.5 BRANG COURS	Understa Design a Configur Analyze Analyze CH: SE:	anding of fundamental networking co and implement computer networks, or e and manage network devices such issues of routing and congestion me internal workings of the Internet and B.TECH- ECE	DCN COURSE OUTCO CO S oncepts, including considering factors h as routers, switco echanism for indep of a number of co ECE /B.Tech VII YEAR: OFC	COMES (CO) TATEMENT protocols, architectures, to s such as scalability, perfor thes, firewalls, and access pendent and internetworkin pommon Internet application VII	SUB pologies, mance, s points to g network s and pro s and pro	and technologies ecurity, and reliab support network of s for wired and w otocols(DNS, SMT SESSION: SEMESTER: JECT CODE:	BECT-504(B) ility. communication eff ireless link. P, FTP, HTTP, W 2022-23 VII BECT-702			
CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4 BECT504.5 BRANG COUR	Understa Design a Configur Analyze Analyze CH: SE:	anding of fundamental networking co and implement computer networks, co e and manage network devices such issues of routing and congestion me internal workings of the Internet and B.TECH- ECE	DCN COURSE OUTO CO S oncepts, including considering factors h as routers, switc echanism for indep of a number of co ECE /B.Tech VII YEAR: OFC COURSE OUTO	COMES (CO) TATEMENT protocols, architectures, to a such as scalability, perfor thes, firewalls, and access bendent and internetworkin bommon Internet application VII COMES (CO)	SUB pologies, mance, s points to g network s and pro s and pro	and technologies ecurity, and reliab support network c (s for wired and w otocols(DNS, SMT SESSION: SEMESTER: JECT CODE:	BECT-504(B) ility. communication eff ireless link. P, FTP, HTTP, W 2022-23 VII BECT-702			
CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4 BECT504.5 BRANG COURS SUBJE CO #	Understa Design a Configur Analyze Analyze CH: SE: CT:	anding of fundamental networking co and implement computer networks, co e and manage network devices such issues of routing and congestion me internal workings of the Internet and B.TECH- ECE	DCN COURSE OUTO CO S oncepts, including considering factors h as routers, switc echanism for indep of a number of co ECE /B.Tech VII YEAR: OFC COURSE OUTO CO S	COMES (CO) TATEMENT protocols, architectures, to s such as scalability, perfor thes, firewalls, and access pendent and internetworkin ommon Internet application VII COMES (CO) STATEMENT	SUB pologies, mance, s points to g network s and pro s and pro	And technologies ecurity, and reliab support network of sofor wired and w otocols(DNS, SMT SESSION: SEMESTER: JECT CODE:	BECT-504(B) ility. communication eff ireless link. P, FTP, HTTP, W 2022-23 VII BECT-702			
SUBJE CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4 BECT504.5 BRANG COUR SUBJE CO # BECT702.1	Understa Design a Configur Analyze Analyze CH: SE: CT: Understa	anding of fundamental networking co and implement computer networks, of e and manage network devices such issues of routing and congestion me internal workings of the Internet and B.TECH- ECE	DCN COURSE OUTO CO S oncepts, including considering factors h as routers, switc echanism for indep of a number of co ECE /B.Tech VII YEAR: OFC COURSE OUTO CO S cal fiber communit	COMES (CO) TATEMENT protocols, architectures, to a such as scalability, perfor thes, firewalls, and access bendent and internetworkin ommon Internet application VII VII COMES (CO) TATEMENT cation, including light propa	SUB pologies, mance, s points to g network s and pro s and pro SUB	and technologies ecurity, and reliab support network of (s for wired and w otocols(DNS, SMT SESSION: SEMESTER: JECT CODE:	BECT-504(B) ility. communication eff ireless link. P, FTP, HTTP, W 2022-23 VII BECT-702 ion, and optical fik			
SUBJE CO # BECT504.1 BECT504.2 BECT504.3 BECT504.4 BECT504.5 BRANG COURS SUBJE CO # BECT702.1 BECT702.2	Understa Design a Configur Analyze Analyze CH: SE: CT: Understa Illustrate	anding of fundamental networking co and implement computer networks, of e and manage network devices such issues of routing and congestion me internal workings of the Internet and B.TECH- ECE	DCN COURSE OUTO CO S oncepts, including considering factors h as routers, switc echanism for indep of a number of co ECE /B.Tech VII YEAR: OFC COURSE OUTO CO S cal fiber communic	COMES (CO) TATEMENT protocols, architectures, to a such as scalability, perforn thes, firewalls, and access pendent and internetworking pommon Internet application VII COMES (CO) TATEMENT cation, including light propa and LASER) and detectors (SUB pologies, mance, s points to g network s and pro s and pro SUB	and technologies ecurity, and reliab support network of socols(DNS, SMT SESSION: SEMESTER: JECT CODE: otal internal reflect Avalanche Photo of	BECT-504(B) ility. communication eff ireless link. P, FTP, HTTP, W 2022-23 VII BECT-702 ion, and optical file diode).			

BECT702.4 Analyze	the channel impairments: losses an	d dispersion.							
BECT702.5 Design a	and analyze optical fiber networks fo	r various application	ons, considering factors such	as network topology, si	gnal loss, disper				
BRANCH:		ECE /B.Tech VII		SESSION:	2022-23				
COURSE:	B.TECH- ECE	YEAR:	VII	SEMESTER:	VII				
SUBJECT:		OFC LAB		SUBJECT CODE:	BECP-702				
CO #		COURSE OUTC	COMES (CO)						
SECP702.1 Ability to C	characterize optical libers in terms of param	eters such as core dia	light omitting diados (LEDs) and k	tion coefficient, and dispersion	n characteristics.				
BECP702.2 Understanding the operation and characteristics of optical sources (such as light-emitting diodes (LEDs) and laser diodes) optic communication systems. BECP702.3 Familiarity with techniques for measuring optical power, attenuation, and dispersion in optical fibers									
BECP702.4 Assessing	the performance of optical networks in terr	ns of capacity, latency	/. and reliability under different oper	ating conditions and configur	ations.				
SECP702.5 Analyzing	the impact of noise sources (such as shot r	noise and thermal nois	e) and fiber impairments on the per	formance of optical commun	ication systems, inc				
BRANCH:		ECE /B.Tech III		SESSION:	2022-23				
COURSE:	B.TECH- ECE	YEAR:		SEMESTER:	V				
SUBJECT:	\	/LSI LAB		SUBJECT CODE:	BECP-503				
			COMES (CO)						
CO #		CO S	STATEMENT						
SECP503.1 Analyze	various logic circuits using simulation	on tools.							
BECP503.2 Model a	rithmetic logic circuits using simulati	on tools							
BECP503.3 Analyze	various amplifiers using simulation	tools.							
BECP503.4 Simulate	e memories using simulation tools .								
SECP503.5 Acquire	skills of team work, technical comm	unication and effe	ctive report writing.		7				
BRANCH:		ECE /B.Tech 5TH		\$ESSION:2022-2	2022-23				
COURSE:	B.TECH	YEAR:	3RD	SEMESTER:5th	I				
SUBJECT:	SIMULATIO	ON SOFTWARE L	AB	SUBJECT CODE:	BECP-506				
		COURSE OUTC	COMES (CO)						
CO #		COS	STATEMENT						
BECP506.1 Acquire	a thorough understanding of the several	types of simulation	methods utilized in electrical En	gineering.					
SECP506 2 Apply fo	recast performance outcomes assess sy	stem behavior and r	nodel electrical circuits by using	Simulation lab					
ECD506.2 Catagoria	za simulation tachniques to solve real w	varld anginaaring pro	bloms encountered in electrical	Sustama					
	ze simulation techniques to solve fear-w			Systems.					
SECF506.4 Analyze	simulation models to experimental resul	its or theoretical pre-	alcuons.						
BECP506.5 formulate	e hypotheses, design simulation experim	nents,			76				
BRANCH: ECE	E/B.Tech 7TH			SESSION:2022-23	2022-23				
COURSE:	В.ТЕСН	YEAR:	4	SEMESTER:	7th				

SUBJECT:	VIF	RTUAL LAB		S	UBJECT CODE:	BECP-705	BECP-705		
BECP705.1	Impleme	nt their understanding of theoretical	Concepts on prac	tical setups.					
BECP705.2	conduct	virtual experiments, which include a	ssembling appara	tus, gathering info	rmation, and Inte	rpreting findings.			
BECP705.3	navigate	the difficulties and uncertainties that	it come with condu	cting experiments	6.				
BECP705.4	Virtual la	bs provide opportunities for collabo	ative learning and	teamwork as stu	dents interact W	ith peers and inst	ructors in a virtua		
BECP705.5	Develop	the groundwork for future laborator	/ work in academic	c and professiona	l settings.				
BRANC	CH:		ECE /B.Tech II			SESSION:	2022-23		
COURS	SE:	B.TECH- ECE	YEAR:		<u> </u>	SEMESTER:	IV		
SUBJE	CT:	Analog	Communication		SUE	BJECT CODE:	BECT-403		
COURSE OUTCOMES (CO)									
			CO S	TATEMENT					
BECT403.1	3.1 Analyze the need of modulation for communication systems.								
BECT403.2	Explain t	he behavior of the communication s	systems in the pres	sence of noise.					
BECT403.3 Apply Sampling Theorem in different modulation techniques.									
BEC1403.4	Compare	e the different analog and digital mo	dulation schemes	for transmission o	f information.				
BEC 1403.5		e probability of white and gaussian r							
BRANC)H:		ECE /B. I ech II			SESSION:	2022-23		
COURS	SE:	B.TECH- ECE	YEAR:		 	SEMESTER:	IV		
SUBJE	CT:	Analog Co	ommunication La	b	SUBJECT CODE: BECP-403				
	-		COURSE OUTC	OMES (CO)					
CO #			CO S	TATEMENT					
BECP403.1	Apply the	e fundamentals to explain the function	onality of modulation	on anddemodulati	on.				
BECP403.2	Analyze	the concepts, write and simulate the	e concepts of AM a	and AM Demodula	tion				
BECP403.3	Examine	FM and FM-Demodulation process	in communication]					
BECP403.4	Impleme	nt the AM and FM functionalities.							
BECP403.5	Design t	ne simulation environments in PAM,	PWM, PPM and v	verification of circu	iitand waveform ii	n software platfor	m		
BRANC	CH:		ECE /B.Tech III			SESSION:	2022-23		
COURS	SE:	B.TECH- ECE	YEAR:	l	I	SEMESTER:	VI		
SUBJE	CT:	Antenna An	d Wave Propagat	ion	SUE	BJECT CODE:	BECT- 602		
			OURSE OUTC	OMES (CO)	1				

CO #			COS	STATEMENT					
BECT602.1	Apply the	e knowledge of Maxwell's equation o	on potential function	on of antenna.					
BECT602.2	Determir	ne different antenna parameters.							
BECT602.3	Analyze	types of Antenna used in electroma	gnetic field.						
BECT602.4	Explain	the concept of Aperture and slot and	tenna.						
BECT602.5	3ECT602.5 Evaluate the radio wave propagation.								
BRANG	CH:		ECE /B.Tech IV			SESSION:	2022-23		
COUR	SE:	B.TECH- ECE	YEAR:	IV		SEMESTER:	VIII		
SUBJE	CT:	Telecommunicatio	on And Switching	g Network	SUB	JECT CODE:	BECT- 803©		
			COURSE OUTC	COMES (CO)					
CO #	CO # CO STATEMENT								
BECT803.1	Analyze	Switching, Signaling and traffic in the co	ontext oftelecommu	nication network.					
BECT803.2	Determin	e the switching Functions.							
BECT803.3	Analyze	signaling, packet switching and network	(
BECT803.4	F803.4 Design and analyze multistage switching systems								
BECT803.5	BECT803.5 Calculate the electronic switching system problems								
COUR	SE:	B.TECH	YEAR:	IV		SEMESTER:	VIII		
SUBJE	CT:	WIRELESS	COMMUNICATI	ON	SUB	JECT CODE:	BECT-802		
			COURSE OUTC	COMES (CO)					
CO #			CO 5	STATEMENT					
BECT701.1	Analyze	different wireless communications a	and cellular system	n scheme.					
BECT701.2	Demons	trate the various multiple access scl	neme like CDMA ⁻	TDMA FDMA etc.					
BECT701.3	Apply the	e formulation and properties for proc	cedure to measure	e Handoffs,Sectoring,swapp	ing and	traffic rates.			
BECT701.4	Classify	the equalizer and diversity technique	es.						
BECT701.5	Point out	t the existing and recent technologie	es(4g,5g).						
BRAN	CH:		EEE /B.Tech II			SESSION:	2022-23		
COUR	SE:	B.TECH	YEAR:	IV		SEMESTER:	VIII		
SUBJE	CT:	WIRELESS C	OMMUNICATION		SUB	JECT CODE:	BECP-802		
00 "			COURSE OUTC	OMES (CO)					
CO #			CO S	STATEMENT					

BECP701.1 Identif	y the fundamental concept of antenna and	describe the various paramet	ers related to anter	CP701.1 Identify the fundamental concept of antenna and describe the various parameters related to antenna								
BECP701.2 Descri	be the recent developments of antenna in	fields of wireless technologies	5									
BECP701.3 Analyz	e the characteristics of Gunn diode and the	e output power obtained.										
BECP701.4 Sketch	the characteristics of simple microwave c	ircuits like couplers, power div	/iders and hybrid rii	ng.								
BECP701.5 Analyz	e the square wave modulation of Microway	/e signal using PIN diode										
BRANCH:	EC	E /B.Tech II		SESSION:	2022-23							
COURSE:	B.TECH	YEAR:	<u> </u>	SEMESTER:	IV							
SUBJECT:	ENERGY & ENVIRONMENT ENGINEERING SUBJECT CODE: BAST-401											
	COU	RSE OUTCOMES (CO)										
CO #		CO STATEMENT										
BAST-401.1 The ol	pjective of this paper is to introduce the fun	damental processes, principle	es, and attributes of	different ecosyste	ems.							
BAST-401.2 The a	oplicability of conceptual models in underst	anding of complex biological	systems, its importa	ance,threats and m	nanagement option							
BAST-401.3 Overv	ew of current energy scenario and energy	resources of the world										
BAST-401.4 Classi	ry the relationships between energy, risk, s	ocletal safety and sustainable	development									
BAST-401.5 Analyz	e energy markets, resource economics an				0000.00							
BRANCH:	H: ECE/B.Tech II SESSION: 2022-23											
COURSE:	B.TECH YEAR: III SEMESTER: VI											
SUBJECT:	CELLULAR & MOBIL		SUE	BJECT CODE:	BECT-604(B)							
SUBJECT:	CELLULAR & MOBIL COU	E COMMUNICATION RSE OUTCOMES (CO)	SUE	JECT CODE:	BECT-604(B)							
SUBJECT:	CELLULAR & MOBIL	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT	SUE	BJECT CODE:	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz	CELLULAR & MOBIL COU	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme.	SUE	SJECT CODE:	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus	CELLULAR & MOBIL COU	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc.	SUE	JECT CODE:	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz	CELLULAR & MOBIL COU the different wireless communications and c as the various multiple access scheme like the formulation and properties for proceed	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se	SUE	BJECT CODE:	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi	CELLULAR & MOBIL COU e different wireless communications and c as the various multiple access scheme like the formulation and properties for proceed fy the equalizer and diversity techniques.	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se	SUE	BJECT CODE:	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp	CELLULAR & MOBIL COU e different wireless communications and c as the various multiple access scheme like the formulation and properties for proceed fy the equalizer and diversity techniques. are the existing and recent technologies(4g	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se	SUE	aJECT CODE:	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp BRANCH:	CELLULAR & MOBIL COU the different wireless communications and c the various multiple access scheme like the formulation and properties for proceed fy the equalizer and diversity techniques. are the existing and recent technologies(4g	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se g,5g). CE /B.Tech	SUE	ad traffic rates.	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp BRANCH: COURSE:	CELLULAR & MOBIL COU COU e different wireless communications and c as the various multiple access scheme like the formulation and properties for proceed fy the equalizer and diversity techniques. are the existing and recent technologies(4c B.TECH- ECE	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se g,5g). CE /B.Tech YEAR:	Ctoring,swapping an	ad traffic rates. SESSION: SEMESTER:	BECT-604(B)							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp BRANCH: COURSE: SUBJECT:	CELLULAR & MOBIL COU te different wireless communications and c as the various multiple access scheme like te the formulation and properties for proced fy the equalizer and diversity techniques. are the existing and recent technologies(4c B.TECH- ECE Analog	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se g,5g). CE /B.Tech YEAR: Circuits	SUE SUE ctoring,swapping ar II SUE	A SESSION: SEMESTER: BJECT CODE:	BECT-604(B) 2022-23 IV BECT-405							
SUBJECT: SUBJECT: BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp BRANCH: COURSE: SUBJECT:	E different wireless communications and c e different wireless communications and c is the various multiple access scheme like the formulation and properties for proceed fy the equalizer and diversity techniques. are the existing and recent technologies(4c B.TECH- ECE B.TECH- ECE Analog COU	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se g,5g). E /B.Tech YEAR: Circuits RSE OUTCOMES (CO)	Ctoring,swapping an	A SESSION: SEMESTER: BJECT CODE:	BECT-604(B)							
SUBJECT: SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp BRANCH: COURSE: SUBJECT: CO # DECT 405 4 Utilization	CELLULAR & MOBIL COU te different wireless communications and c as the various multiple access scheme like te the formulation and properties for proced fy the equalizer and diversity techniques. are the existing and recent technologies(40) B.TECH- ECE Analog COU	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se g,5g). CE /B.Tech YEAR: Circuits RSE OUTCOMES (CO) CO STATEMENT	SUE	A traffic rates.	BECT-604(B)							
SUBJECT: SUBJECT: BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp BRANCH: COURSE: SUBJECT: CO # BECT 405.1 Illustra DECT 405.2 Discus	CELLULAR & MOBIL COU COU End different wireless communications and constructions and constructions and properties for proceed is the various multiple access scheme like the formulation and properties for proceed fy the equalizer and diversity techniques. are the existing and recent technologies(4g B.TECH- ECE B.TECH- ECE Analog COU te the concept of operational amplifier	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se g,5g). E /B.Tech YEAR: Circuits RSE OUTCOMES (CO) CO STATEMENT	Ctoring,swapping an	A traffic rates.	BECT-604(B) 2022-23 IV BECT-405							
SUBJECT: CO # BECT-604B.1 Analyz BECT-604B.2 Discus BECT-604B.3 Analyz BECT-604B.4 Classi BECT-604B.5 Comp BRANCH: COURSE: SUBJECT: CO # BECT 405.1 Illustra BECT 405.2 Discus BECT 405.2 Under	CELLULAR & MOBIL COU COU e different wireless communications and c as the various multiple access scheme like the formulation and properties for proceed fy the equalizer and diversity techniques. are the existing and recent technologies(4g B.TECH- ECE B.TECH- ECE Analog COU te the concept of operational amplifier as different types of power amplifier	E COMMUNICATION RSE OUTCOMES (CO) CO STATEMENT ellular system scheme. CDMA TDMA FDMA etc. dure to measure Handoffs,Se g,5g). E /B.Tech YEAR: Circuits RSE OUTCOMES (CO) CO STATEMENT	Ctoring,swapping an	A traffic rates.	BECT-604(B)							

BECT 405.4 Examine	e the concept of diode, BJT and Fl	ET and their applications								
BECT 405.5 Analyze	analog to digital converters, digita	l to analog converters, a	ctive filters and Schmit	tt triggers	using operational	amplifier.				
BRANCH:		ECE /B.Tech			SESSION:	2022-23				
COURSE:	B.TECH- ECE	YEAR:	I		SEMESTER:	IV				
SUBJECT:	Ana	log Circuits Lab		SUB	JECT CODE:	BECP-405				
		COURSE OUTCOM	IES (CO)							
CO #		CO STA	TEMENT							
BECP 405.1 Describe push pull amplifier & different configurations of feedback amplifier.										
BECP 405.2 Illustrate	BECP 405.2 Illustrate series and shunt voltage regulator and calculate line regulation & ripple factor.									
BECP 405.3 Impleme	ent adder, scalar & various filter ci	cuits using operational a	mplifier.							
BECP 405.4 Calculat	e frequency of different oscillator									
BECT 405.5 Analyze	frequency response of BJT & FET	l amplifiers								
BRANCH:		EEE /B.Tech			SESSION:	2022-23				
COURSE:	B.TECH- EEE	YEAR:	III		SEMESTER:	VI				
SUBJECT:	Digital	Signal Processing		SUB	JECT CODE:	BECT-603				
		COURSE OUTCOM	IES (CO)							
CO #		CO STA	TEMENT							
BECT 603.1 Understa	and the concept of signals and sys	stems along with frequen	cy analysis							
BECT 603.2 Explain t	the concept of multi rate signal pro	ocessing.								
BECT 603.3 Apply FF	T Algorithm to compute DFT of d	iscrete signals.								
BECT 603.4 Illustrate	the effect of finite register length	in FIR digital filters.								
BECT 603.5 Analyze	the frequency characteristics of II	R and FIR digital filters fo	or given requirements							
BRANCH:		EEE /B.Tech			SESSION:	2022-23				
COURSE:	B.TECH- EEE	YEAR:	III		SEMESTER:	VI				
SUBJECT:	Digital S	ignal Processing Lab		SUB	JECT CODE:	BECP-603				
		COURSE OUTCOM	IES (CO)							
CO #		CO STA	TEMENT							
BECP 603.1 Understa	and the mathematical operation or	n discrete signals.								
BECP 603.2 Sketch t	he magnitude and phase respons	e of DFT,Inverse DFT ar	nd FFT of descrete tim	e signals						
BECP 603.3 Calculat	e linear and Circular convolution c	f discrete sequences								
BECP 603.4 Illustrate	the effect of finite register length	in FIR digital filters.								

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BRAN	CH:		ECE /B.Tech II			SESSION:	2022-23	
COUR	SE:	B.TECH- ECE	YEAR:	I		SEMESTER:	IV	
SUBJE	CT:	CONT	ROL SYSTEM		SUB	JECT CODE:	BEET 404	
			COURSE OUTC	OMES (CO)				
CO #			CO S	TATEMENT				
BEET 404.1	04.1 Categorize different types of system and identify a set of algebraic equations to represent and model a complicated system							
BEET 404.2	Apply st	andard test signals to a system t	o determine their	characteristics.				
BEET 404.3	Examin	e the system behaviour using var	ious stability anal	lysis techniques.				
BEET 404.4	Analyze	the stability of various linear time	e invariant system	ns using frequency respo	onse me	thods.		
BEET 404.5	Identify	the needs of different types of co	ntrollers and com	pensator to ascertain th	e require	ed dynamic respo	onse from the sy	
BRAN	CH:		ECE /B.Tech II			SESSION:	2022-23	
COUR	SE:	B.TECH- ECE	YEAR:	I		SEMESTER:	IV	
SUBJE	CT:	CONTR	OL SYSTEM LAB		SUB	JECT CODE:	BEEP 404	
			COURSE OUTC	OMES (CO)				
CO #			CO S	TATEMENT				
BEEP 404.1	Apply th	e conversion of transfer function	s to check the pe	rformance parameters in	n time do	main for various	inputs via MATL	
BEEP 404.2	Test the	performance characteristics and	d working of Magr	netic amplifier, DC & AC	servo m	otors and synchr	OS.	
BEEP 404.3	Analyze	the system's stability with different	ent methods of tim	ne & frequency domain u	ising MA	TLAB software.		
BEEP 404.4	Design	controllers for continuous proces	s control and tuni	ing of 'temperature, level	and pre	ssure based' cor	ntrol systems.	
BEEP 404.5	Analyze	the performance of control syste	ems with different	controllers / compensate	ors.			

BECP 603.5 Analyze the frequency characteristics of IIR and FIR digital filters for given requirements