

## Department of Liberal Education Era University, Lucknow Course Outline Effective From: 2023-24

Name of the	B.A. / B.Sc. (LIBERA	AL EDUCA	TION)	Year/ Semester:	3 <sup>rd</sup> /5 <sup>th</sup>			
Program	Alashaa aad Caaaaa MT201		T					
Lourse Name	Algebra and Group Theory	Course M1301		i ype:	Ineory			
Credits	Group Theory	1 Coue: 1		Total Sessions Hours	60 Hours			
Evaluation	Internal	50 Marks		End Term Exam:	50	Marks		
Spread	Continuous				30 Iviai KS			
	Assessment:							
Type of		Core		O Creative				
Course	C Lore C Life Skill							
C	This paper is design	ied with the	e objective	of helping students unders	stand and	comprehend		
Course	the important conce	pts in algei	bility to thi	s will learn to illustrate an	a prove i	nathematical		
Objectives	ability to communic	stiale tile a	unity to the	orally and in writing	and absura	icity, and the		
			latics, both	orany, and in writing.				
Course Outo	comes (CO): After	the succes	sful course	e completion, learners w	vill develo	op following		
attributes:		2000005				1		
Course								
Outcome			At	tributes				
(CO)								
CO1	Learn the application of matrix in real life and in decision making for society.							
CO2	Understand the importance of algebraic properties with regard to working within various							
	number systems.							
CO3	Extend group structure to finite permutation groups (Cayley's Theorem).							
CO4	Generate groups given specific conditions.							
Pedagogy	Interactive, discussion-bases, student-centered, presentation.							
	Mid-term Examination: 20 Marks							
Internal	Activity: 10 Marks							
Evaluation	Class test: 05 Marks							
Mode	Unline Test/Objective Test: 05 Marks							
	Assignments/Presentation: 03 Marks							
Session	Торіс				Hours	Mapped		
Details			-			ĈÔ		
Unit 1	Matrix: Symmetri	c, Skew-s	ymmetric,	Hermitian and Skew-	15	CO1		
	Hermitian, Elementary operations, Rank of Matrix, Linear independence of row and columns matrices, consistency and							
	inconsistency of linear equations, Characteristic equations,							
	Eigenvalues and Eigenvectors, Cayley-Hamilton theorem and							
	applications.							
	Activity: Create cl	hart for th	e process	to find rank of matrix,				
	Eigenvalue and Eigenvector and also verification of Cayley							
	Hamilton theorem.							
1	1							

Unit 2		Relation between roots and coefficient of general polynomial equation in one variable, transformation of equations, Descarte rule of sign.Activity: Using Descarte rule to find the number of root of any order polynomial.							mial ons, order	15	CO2			
Unit 3		<ul> <li>Binary operations, Algebraic structure, Definition of a group with examples and basic properties, Subgroup, Generators of group, Cyclic groups, Permutation groups, Even and odd permutations.</li> <li>Activity: Algebra of binary numbers.</li> </ul>								roup rs of odd	15	CO3,CO4		
Unit 4		Cosets, Lagrange's theorem and related results, Euler theorem, Normal subgroup, Quotient groups, Homomorphism and isomorphism, Fundamental theorem of homomorphism, First, second and third isomorphism theorems and their related results15CO4Activity: Assignment based activity regarding Theorem of isomorphism.15Image: Cosets and the second								04				
CO-PO	) and I	PSO M	apping											
	1													
CO	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PSO1	PSO2	PSO3	PSO4	PSO5	PSO6
CO CO1	<b>PO1</b> 2	PO2	PO3	<b>PO4</b> 3	PO5	<b>PO6</b>	PO7	<b>PO8</b>	<b>PSO1</b> 2	<b>PSO2</b>	PSO3	PSO4	PSO5	PSO6
CO CO1 CO2 CO3	PO1 2	<b>PO2</b>	PO3	<b>PO4</b> 3	PO5	<b>PO6</b> 1 1	PO7	<b>PO8</b> 1	<b>PSO1</b> 2 2 1	<b>PSO2</b> 1 1	PSO3	PSO4	PSO5	<b>PSO6</b> 1 1
CO CO1 CO2 CO3 CO4	PO1 2 2 2	PO2 1	PO3	PO4 3	PO5	<b>PO6</b> 1 1 1 1 1	PO7	PO8 1 2	PSO1           2           1           1	PSO2 1 1 1	PSO3	PSO4	PSO5	PSO6 1 1 1 1
CO CO1 CO2 CO3 CO4 Strong co	PO1 2 2 pontribution	PO2 1 1	PO3	PO4 3	PO5	PO6 1 1 1 1 L	PO7	PO8 1 2 ution-1,	PSO1           2           1           1	<b>PSO2</b> 1 1 1	PSO3	PSO4	PSO5	PSO6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges	PO1 2 2 ontribution sted Re	PO2 1 <i>n-3</i> , adings	PO3	PO4 3	PO5	PO6 1 1 1 L	PO7	PO8 1 2 ution-1,	<b>PSO1</b> 2 2 1 1	PSO2 1 1 1	PSO3	PSO4	PSO5	PSO6 1 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I	2 2 mtribution sted Re Books	PO2 1 a-3, adings Herste	Avera	PO4 3 Inge contri	PO5	P06 1 1 1 1 gebra.	PO7	PO8 1 2 ution-1, astern	PSO1 2 2 1 1 Ltd.	PSO2 1 1 1	PSO3	PSO4	PSO5	PSO6 1 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer	PO1 2 2 ontribution sted Re Books rence	PO2 1 n-3, adings Herste	Avera Avera	PO4 3 age contri	PO5	PO6 1 1 1 gebra.	PO7 .ow contrib Wiley E rebra. Pr	PO8 1 2 ution-1, astern entice	PSO1 2 1 1 Ltd.	PSO2	PSO3	PSO4	PSO5	PSO6 1 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo	PO1 2 2 ontribution sted Re Books rence	PO2 1 a-3, adings Herste	PO3 Avera ein, I. N K.B. N	PO4 3 <i>age contri</i> N. Topio Matrix a	PO5	PO6 1 1 1 gebra. The second secon	PO7 ow contrib Wiley E ebra. Pr	PO8 1 2 <i>ution-1</i> , astern entice	PSO1 2 1 1 Ltd.	PSO2 1 1 India P	PSO3	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 mtribution sted Re Books cence oks Text	PO2 1 1 a-3, adings Herste Datta, Unit 1	PO3 Avera : : K.B. N 1:	PO4 3 age contri	PO5	PO6 1 1 1 gebra. <sup>1</sup> gebra. <sup>1</sup>	P07 	PO8 1 2 <i>ution-1,</i> astern entice	PSO1 2 1 1 Ltd. Hall of	PSO2	PSO3	PSO4	PS05	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 <i>n-3,</i> adings Hersto Datta, Unit 1 1.	Avera Avera Ein, I. N K.B. N	PO4 3 age contri N. Topic Matrix a	PO5 bution-2, cs in Al and Line	PO6 1 1 1 gebra. ' ear Alg	P07 .ow contrib Wiley E gebra. Pr /watch?	PO8 1 2 <i>ution-1,</i> astern entice	PSO1 2 1 1 Ltd. Hall of SuF2g2	PSO2 1 1 India P	PSO3	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 2 2 2 3 5 ted Re Books 2 5 cence 0 ks Text	PO2 1 1 1 1 1 1 1 1 1 1 2 1 1 1 1 1 1 1 1	Avera Avera cin, I. N K.B. N I: https https	PO4 3 <i>age contri</i> J. Topic Matrix a ://www	PO5 <i>bution-2</i> , cs in Al and Line v.youtuk v.youtuk	PO6 1 1 gebra. gebra. be.com/	P07 www.contrib Wiley E gebra. Pr watch?v watch?v	PO8 1 2 ution-1, astern entice v=kDji	PSO1 2 1 1 Ltd. Hall of SuF2g2 IMCsd	PSO2 1 1 India P	PSO3	PSO4	PSO5	PSO6 1 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 1 1 1 1 1 1 1 1 1 2 3 1 1 1 1 1 1 1	Avera Avera in, I. N K.B. N I: <u>https</u> <u>https</u>	PO4 3 age contri J. Topio Matrix a ://www ://www	PO5 <i>ibution-2</i> , cs in Al and Line v.youtuk v.youtuk v.youtuk	PO6 1 1 1 gebra. L gebra. G gebr	P07 www.contrib Wiley E gebra. Pr watch?v watch?v watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOF v=56dl	PSO1 2 2 1 1 Ltd. Hall of SuF2g2 MCsdl Et9EO2	PSO2 1 1 India P <u>Zk</u> <u>Dti0</u> <u>ZM</u>	PSO3	PSO4	PS05	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 <i>n-3,</i> adings Hersto Datta, Unit 1 1. 2. 3. Unit 2	Avera Avera Ein, I. N K.B. N I: https https	PO4 3 Inge contri I. Topic Matrix a ://www ://www	PO5 ibution-2, cs in Al and Line v.youtuk v.youtuk	PO6 1 1 1 gebra. ' gebra. ' ear Alg	P07 ow contrib Wiley E gebra. Pr /watch?v /watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOH v=56dI	PSO1 2 2 1 1 Ltd. Hall of SuF2g2 MCsd Et9EO2	PSO2 1 1 India P <u>Zk</u> <u>Dti0</u> <u>ZM</u>	PSO3	PSO4	PS05	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 2 2 2 3 5 ted Re Books 2 5 cence 0 ks Text	PO2 1 <i>n-3</i> , adings Hersto Datta, Unit 1 1. 2. 3. Unit 2 1	Avera Avera icin, I. N K.B. N I: https https https 2:	PO4 3 <i>age contri</i> J. Topic Matrix a ://www ://www	PO5 <i>ibution-2</i> , cs in Al and Lind v.youtuk v.youtuk	PO6 1 1 1 gebra. T gebra. T gebra. T pe.com/ pe.com/	P07 www.contrib Wiley E gebra. Pr watch?v watch?v watch?v watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOH v=56dl	PSO1 2 2 1 1 1 Ltd. Hall of SuF2g2 HMCsdl Et9EO2	PSO2 1 1 1 India P Zk Dti0 Z_M kto	PSO3	PSO4	PS05	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 2 1 1 1 2 1 1 2 1 2 1 2 2 1 2	Avera Avera in, I. N K.B. N K.B. N I: https https https https https	PO4 3 age contri J. Topic Matrix a ://www ://www ://www	PO5 <i>bution-2</i> , cs in Al and Line v.youtuk v.youtuk v.youtuk	PO6 1 1 1 gebra. gebra. gebra. pe.com/ pe.com/ pe.com/	P07 www.contrib Wiley E gebra. Pr watch?v /watch?v /watch?v /watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOF v=56dl v=FAP	PSO1 2 2 1 1 Ltd. Hall of SuF2g2 MCsdl Et9EO7 ShLAd Tw_dY	PSO2 1 1 India P <u>Zk</u> <u>Dti0</u> <u>Zk</u> <u>kto</u>	PSO3	PSO4	PS05	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 <i>n-3,</i> adings Hersto Datta, Unit 1 1. 2. 3. Unit 2 1. 2. 3.	Avera Avera in, I. N K.B. M I: https https https https https	PO4 3 <i>age contri</i> N. Topic Matrix a ://www ://www ://www ://www	PO5 <i>ibution-2</i> , <i>ibution-2</i> , cs in Al and Line <i>v</i> .youtuk <i>v</i> .youtuk <i>v</i> .youtuk <i>v</i> .youtuk <i>v</i> .youtuk <i>v</i> .youtuk	PO6 1 1 1 gebra. ' gebra. ' gebra. ' gebra. ' be.com/ be.com/ be.com/ be.com/ be.com/	P07 www.contrib Wiley E wiley E wiley R witch?v watch?v watch?v watch?v watch?v watch?v watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOH v=56dl v=FAP v=EPS	PSO1 2 2 1 1 Ltd. Hall of SuF2g2 HMCsdl Et9EO2 ShLAd Tw_dY s/algeb	PSO2 1 1 India P <u>Ck</u> <u>Dti0</u> <u>CM</u> <u>kto</u> <u>ra</u> 1/dec	PS03	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 <i>n-3</i> , adings Hersto Datta, Unit 1 1. 2. 3. Unit 2 1. 2. 3.	Avera Avera in, I. N K.B. N K.B. N I: https https https https calcu	PO4 3 <i>age contri</i> J. Topic Matrix a ://www ://www ://www ://www	PO5 <i>bution-2</i> , cs in Al and Line v.youtuk	PO6 1 1 1 gebra. gebra. gebra. be.com/	P07 www.contrib Wiley E wiley E wiley A watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOH v=56dI v=FAP v=EPS culator 2-x%2	PSO1 2 2 1 1 1 Ltd. Hall of SuF2g2 HCsdl Et9EO2 ShLAd Tw_dY s/algebr B1	PSO2 1 1 1 India P Zk Dti0 C_M kto ra-1/des	PSO3	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 mtribution sted Re Books rence bks Text	PO2 1 1 1 1 1 1 1 1 1 1 1 2 1 1 1 2 1 1 1 2 1	Avera Avera in, I. N K.B. N I: https https https calcu a.	PO4 3 age contri N. Topio Matrix a ://www ://www ://www ://www ://www	PO5 bution-2, cs in Al and Lind v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk v.youtuk	PO6 1 1 1 gebra. ear Alg be.com/	P07 www.contrib Wiley E ebra. Pr watch?v wa	PO8 1 2 ution-1, astern entice v=kDji v=ZOF v=56dl v=FAP v=EPS culator 2-x%2	PSO1 2 2 1 1 1 Ltd. Hall of SuF2g2 MCsdl Et9EO2 ShLAd Tw_dY s/algeb: B1	PSO2 1 1 India P Zk Dti0 <u>Zk</u> <u>C M</u> kto qUM ra-1/des	PSO3	rule-of-	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 <i>n-3</i> , adings Hersto Datta, Unit 1 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 3. Unit 2 1. 1. 3. Unit 3. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	Avera Avera in, I. N K.B. N K.B. N I: https https https https calcu 3: https	PO4 3 <i>age contri</i> N. Topic Matrix a ://www ://www ://www ://www ://www ://www	PO5 <i>ibution-2,</i> cs in Al and Line v.youtuk	PO6 1 1 1 gebra. ' gebra. ' ge	P07 www.contrib Wiley E wiley E witch?v watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOF v=56dI v=FAP v=EPS culator 2-x%2 $v=91V^{3}$	PSO1 2 2 1 1 Ltd. Hall of SuF2g2 MCsdl Et9EO2 PShLAd Tw_dY s/algeb B1 YVtAm	PSO2 1 1 India P <u>Zk</u> <u>Dti0</u> <u>CM</u> <u>kto</u> <u>qUM</u> ra-1/des	PS03	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 mtribution sted Re Books rence oks Text	PO2 1 <i>n-3</i> , adings Hersto Datta, Unit 1 1. 2. 3. Unit 2 1. 2. 3. Unit 2 1. 3. Unit 2 1. 2. 3. Unit 2 1. 3. Unit 2 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.	Avera Avera in, I. N K.B. N K.B. N I: https https https https https calcu 3: https	PO4 3 <i>age contri</i> J. Topic Matrix a ://www ://www ://www ://www ://www ://www ://www	PO5 <i>bution-2</i> , cs in Al and Line v.youtuk	PO6 1 1 1 gebra. gebra. gebra. for a state of the state of t	P07 Wiley E Wiley E Wiley E yebra. Pr watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOH v=56dI v=FAP v=EPS culator 2-x%2 v=9IV	PSO1 2 2 1 1 1 Ltd. Hall of SuF2g2 MCsdl Et9EO2 ShLAd Tw_dY s/algeb1 B1 YVtAu	PSO2 1 1 1 India P Zk Dti0 <u>Zk</u> Dti0 <u>Zk</u> Qti0 <u>C</u> M kto qUM ra-1/des 1Qs	PSO3	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 <i>n-3,</i> adings Hersta Datta, Unit 1 1. 2. 3. Unit 2 1. 2. 3. Unit 2. 1. 1. 2. 3. Unit 2. 1. 1. 2. 3. Unit 2. 1. 1. 2. 3. Unit 2. 1. 1. 2. 3. Unit 2. 1. 1. 2. 3. Unit 2. 1. 1. 1. 1. 1. 2. 3. Unit 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1	PO3 Avera in, I. N K.B. N K.B. N I: https https https calcu 3: https https calcu 3: https	PO4 3 <i>age contri</i> N. Topio Matrix a ://www ://www ://www ://www ilator/? ://www	PO5 <i>bution-2</i> , cs in Al and Line <i>y</i> .youtuk <i>y</i> .youtuk	PO6 1 1 gebra. gebra. gebra. gebra. fear Alg be.com/	P07 Wiley E wiley E wiley E yebra. Pr watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOF v=56dl v=FAP v=EPS culator 2-x%2 v=9IV v=-h3C	PSO1 2 2 1 1 1 Ltd. Hall of SuF2g2 HMCsdl CshLAd Tw_dY s/algeb B1 YVtAu GsWp6-	PSO2 1 1 1 India P Zk Dti0 Z M kto iqUM ra-1/des uQs n0	PS03	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 ontribution sted Re Books rence oks Text	PO2 1 <i>n-3,</i> adings Hersto Datta, Unit 1 1. 2. 3. Unit 2 1. 2. 3. Unit 2. 3. Unit 2. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5	PO3 Avera in, I. N K.B. N K.B. N I: https https https https calcu 3: https https https https https https	PO4 3 <i>age contri</i> J. Topic Matrix a ://www ://www ://www ://www ://www ://www ://www ://www	PO5 <i>bution-2,</i> <i>cs</i> in Al and Line <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i> <i>y.youtuk</i>	PO6 1 1 1 gebra. ' gebra. ' ge	P07 www.contrib Wiley E wiley E with the second watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOH v=56dI v=FAP v=EPS culator 2-x%2 v=9IV'' v=-h3C v=L7P	PSO1 2 2 1 1 1 Ltd. Hall of SuF2g2 MCsdl Et9EOZ ShLAd Tw_dY s/algeb B1 YVtAu SsWp6- 2JZRE9	PSO2 1 1 1 India P <u>Zk</u> <u>Dti0</u> <u>ZM</u> <u>kto</u> <u>qUM</u> <u>ra-1/des</u> <u>uQs</u> <u>n0</u> <u>DbE</u>	PS03	PSO4	PSO5	PSO6 1 1
CO CO1 CO2 CO3 CO4 Strong co Sugges Text- I Refer Boo Para	PO1 2 2 mtribution sted Re Books rence oks Text	PO2 1 <i>n-3,</i> adings Hersto Datta, Unit 1 1. 2. 3. Unit 2 1. 2. 3. Unit 2. 3. Unit 2. 5. 5. 5. 5. 5. 5. 5. 5. 5. 5	PO3 Avera in, I. N K.B. N K.B. N I: https	PO4 3 <i>age contri</i> J. Topic Matrix a ://www ://www ://www ://www ://www ://www ://www ://www ://www	PO5 <i>bution-2,</i> cs in Al and Lind v.youtuk	PO6 1 1 1 gebra. gebra. gebra. gebra. pe.com/	P07 Wiley E watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v watch?v	PO8 1 2 ution-1, astern entice v=kDji v=ZOF v=56dI v=FAP v=EPS culator 2-x%2 v=9IV' v=-h3C v=L7P	PSO1 2 2 1 1 1 Ltd. Hall of SuF2gZ MCsdl Et9EOZ ShLAd Tw_dY s/algebi B1 YVtAu GsWp6- 2JZRE9	PSO2 1 1 1 India P Zk Dti0 <u>Zk</u> Dti0 <u>Z</u> M kto qUM ra-1/des 1Qs n0 bE	PS03	PSO4	PSO5	PSO6 1 1

Recapitulation & Examination Pattern						
Internal Continuous Assessment:						
Component	Marks	Pattern				
Mid Semester	20	Section A: Contains 10 MCQs/Fill in the blanks/One Word				
		Answer/ True-False type of questions. Each question carries 0.5				
		mark.				
		Section B: Contains 07 descriptive questions out of which 05				
		questions are to be attempted. Each question carries 03 marks.				
Activity	10	Will be decided by subject teacher				
Class Test	05	Contains 05 descriptive questions. Each question carries 01				
		mark.				
Online Test/ Objective Test	05	Contains 10 multiple choice questions. Each question carries 0.5				
		mark.				
Assignment/ Presentation	05	Assignment to be made on topics and instruction given by subject				
		teacher.				
Attendance	05	As per policy.				
Total Marks	50					

Course created by:

Dr. Sheeba Rizvi

Dr. Toukeer Khan

Approved by: Prof. Nadeem Ur Rahman

1 man

Signature:

Signature: