CS-1A

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday	Introduction to Information and Comm Technology - Lab Muiz Qadir		on and Communication	English Composition and Comprehension - Muhammad Iqbal		Comprehension - Lab
Tuesday	English Composition and Comprehension 1 Muhammad Ammar	Linear Algebra 1 Amjad Hussain	English Composition and Comprehension - Lab 1 Sadia Ashfaq		English Composition and Comprehension - Lab 1 Sadia Ashfaq	Islamic Studies/Ethics 1 Rizwanullah
Wednesday	Digital Logic Design - Lab 1 Muhammad Arslan		Digital Logic Design 1 Mirza Waqar Baig	L U N C H		Programming Fundamentals 1 Rizwan ul Haq
Thursday	Programming Fundamentals - Lab Mughees Ismail		Digital Logic Design 1 Mirza Waqar Baig			Programming Fundamentals 1 Rizwan ul Haq
Friday	Linear Algebra 1 Amjad Hussain	English Composition and Comprehension 1 Muhammad Ammar English Composition and Comprehension 1 Junaid Shahid			English Composition and Comprehension 1 Junaid Shahid	Islamic Studies/Ethics 1 Rizwanullah

CS-1B

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday	English Composition and Comprehension 1 Muhammad Ammar	English Composition and C	Comprehension - Lab 1		Digital Logic Design - Lab Mujahid Hussain	1
Tuesday	Programming Fundamentals 1 Rizwan ul Haq	Linear Algebra 1 Amjad Hussain	Introduction to Information and Communication Technology - Lab 1 Umar Naseer		Introduction to Information and Communication Technology - Lab 1 Umar Naseer	Islamic Studies/Ethics 1 Rizwanullah
Wednesday	Programming Fundamentals 1 Rizwan ul Haq	Programming Fundamenta	Programming Fundamentals - Lab 1 Pariwish Touseef			Digital Logic Design 1 Muhammad Sajid Iqbal
Thursday	English Composition and Comprehension - Lab Muhammad Iqbal English Composition and Comprehension 1 Junaid Shahid				Islamic Studies/Ethics 1 Rizwanullah	
Friday		Digital Logic Design 1 Muhammad Sajid Iqbal	English Composition and Comprehension 1 Muhammad Ammar			Linear Algebra 1 Amjad Hussain

CS-1C

Day/Peri od	I	п	ш	1:15-1:45	IV	v
Monday	English Composition and Comprehension - Lab 1 Rida Akram		English Composition and Comprehension - Lab 1 Junaid Shahid		English Composition and Comprehension - Lab 1 Junaid Shahid	
Tuesday	Digital Logic Design - Lab 1 Mujahid Hussain		English Composition and Comprehension 1 Junaid Shahid English Composition and Comprehension 1 Muhammad Ammar		Linear Algebra 1 Amjad Hussain	
Wednesday	Introduction to Information and Communication Technology - Lab 1 Aqsa Younas		English Composition and Comprehension 1 Junaid Shahid	L U N C H	Digital Logic Design 1 Dr. Adil Zulfiqar	
Thursday	Linear Algebra 1 Amjad Hussain	Islamic Studies/Ethics 1 Zia Ahmad	Programming Fundamentals 1 Dr. Rabia Maqsood		Programming Fundamentals - Lab Ayesha Liaqat	
Friday	Islamic Studies/Ethics 1 Zia Ahmad	Digital Logic Design 1 Dr. Adil Zulfiqar	Programming Fundamentals 1 Dr. Rabia Maqsood		English Composition and Comprehension 1 Muhammad Ammar	

CS-1D

Day/Period	1	п	ш	1:15-1:45	IV	v
Monday		Programming Fundamentals 1 Dr. Rabia Maqsood	English Composition and Comprehension - Lab 1 Rida Akram		English Composition and Comprehension - Lab 1 Rida Akram English Composition and Comprehension 1 Sadia Ashfaq	English Composition and Comprehension 1 Farah Iqbal
Tuesday	Introduction to Information Technology - Lab	on and Communication			Calculus and Analytical Geometry 1 Dr.Mushtaq Ahmad	Programming Fundamentals 1 Dr. Rabia Maqsood
Wednesday	English Composition and Comprehension - Lab 1 Amna Farooq English Composition and Comprehension 1 Farah Iqbal	English Composition and Comprehension - Lab 1 Amna Farooq	English Composition and Comprehension 1 Sadi a Ashfaq	L U N C H		
Thursday	Applied Physics 1 Waheed Ahmad	Islamic Studies/Ethics Zia Ahmad	1		Programming Fundamenta Muhammad Azeem Iftikha	1
Friday	Calculus and Analytical Geometry 1 Dr.Mushtaq Ahmad	Applied Physics 1 Waheed Ahmad				

CS-1E

Day/Period	I	II	ш	1:15-1:45	IV	v
Monday		Introduction to Information Technology - Lab Muiz Qadir	on and Communication		English Composition and C	Comprehensi on - Lab
Tuesday	English Composition and Comprehension 1 Muhammad Iqbal	Pakistan Studies 1 Asif Naveed			Programming Fundamenta Mughees Ismail	ıls - Lab
Wednesday		English Composition and Comprehension 1 Muhammad Iqbal		L U N C H	English Composition and Comprehension 1 Farah Iqbal	Calculus and Analytical Geometry 1 Dr. Mushtaq Ahmad
Thursday	Calculus and Analytical Geometry 1 Dr. Mushtaq Ahmad	English Composition and Comprehension - Lab 1 Mah Rukh	English Composition and Comprehension - Lab 1 Mah Rukh English Composition and Comprehension 1 Farah Iqbal		Applied Physics 1 Waheed Ahmad	
Friday	Applied Physics 1 Waheed Ahmad		Pakistan Studies 1 Asif Naveed		Programming Fundamenta Dr. Danish Shehzad	ıls 1

CS-1F

Day/Period	ı	п	ш	1:15-1:45	IV	v
Monday	Applied Physics 1 Waheed Ahmad		Applied Physics 1 Waheed Ahmad		English Composition and C	Comprehensi on - Lab
Tuesday	Programming Fundamentals 1 Saqib Hayat				English Composition and C	Comprehensi on - Lab
Wednesday	Introduction to Information and Communication Technology - Lab Muhammad Haseeb Arshad			L U N C H	Calculus and Analytical Geometry 1 Dr. Mushtaq Ahmad	English Composition and Comprehension 1 Muhammad Iqbal
Thursday	English Composition and Comprehension 1 Sadia Ashfaq	Calculus and Analytical Geometry 1 Dr. Mushtaq Ahmad	Programming Fundamentals - Lab 1 Umar Naseer		Programming Fundamentals - Lab 1 Umar Naseer	Pakistan Studies 1 Asif Naveed
Friday	Programming Fundamentals 1 Saqib Hayat	English Composition and Comprehension 1 Sadia Ashfaq	Pakistan Studies 1 Asif Naveed		English Composition and Comprehension 1 Muhammad Iqbal	

CS-3A

Day/Period	I	11	ш	1:15-1:45	IV	v
Monday	Applied Physics 1 Muhammad Mohsin Hameed Differential Equations 1 Arfan Shahzad	Computer Organization and Assembly Language - Lab 1 Abuzar Ghafari Computer Organization and Assembly Language 1 Abdul Qadeer Bilal	Computer Organization and Assembly Language - Lab 1 Abuzar Ghafari		Object Oriented Programmi Muhammad Hannan Faroo	1
Tuesday	Digital Logic Design 1 Muhammad Irfan Ishaq Finance & Accounting 1 Agha Mureed Ahmad Khan	Object Oriented Programming 1 Shoaib Saleem	Data Structures - Lab 1 Saba Aslam		Data Structures - Lab 1 Saba Aslam Linear Algebra 1 Ghilmana Sarmad	
Wednesday		Digital Logic Design 1 Muhammad Irfan Ishaq	Data Structures 1 Muhammad Husnain	L U N C H	Finance & Accounting 1 Agha Mureed Ahmad Khan	
Thursday	Calculus and Analytical Geometry 1 Bushra Niaz		Calculus and Analytical Geometry 1 Bushra Niaz			Discrete Structures 1 Dr. Muhammad Ahmad Linear Algebra 1 Chilmana Sarmad
Friday	Applied Physics 1 Muhammad Mohsin Hameed	Discrete Structures 1 Dr. Muhammad Ahmad Object Oriented Programming 1 Shoaib Saleem	Differential Equations 1 Arfan Shahzad		Data Structures 1 Muhammad Husnain	Computer Organization and Assembly Language 1 Abdul Qadeer Bilal

CS-3B

Day/Period	I	II	ш	1:15-1:45	IV	v
Monday	object Oriented Programming - Lab		Computer Organization and Assembly Language 1 Abdul Qadeer Bilal		Computer Orgnaization and Assembly Language - Lab 1 Ali Raza	
Tuesday			Differential Equations 1 Arfan Shahzad		Data Structures - Lab Muhammad Hannan Faroo	q
Wednesday			Computer Organization and Assembly Language 1 Abdul Qadeer Bilal	L U N C H		Discrete Structures 1 Dr. Muhammad Ahmad
Thursday	Fundamentals of Management 1 Muhammad Tayyeb Riaz Object Oriented Programming 1 Dr Usman Habib	Object Oriented Programming 1 Dr Usman Habib				Discrete Structures 1 Dr. Muhammad Ahmad
Friday					Fundamentals of Management 1 Muhammad Tayyeb Riaz	Differential Equations 1 Arfan Shahzad

CS-3C

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday						
Tuesday	Differential Equations Arfan Shahzad	1			Computer Orgnaization an Ali Raza	d Assembly Language - Lab
Wednesday				L U N C H		Data Structures 1 Dr. Hashim Yasin
Thursday	Data Structures - Lab Mughees Ismail	1	Data Structures 1 Dr. Hashim Yasin			Marketing Management 1 Syed Zeeshan Haider
Friday		Marketing Management 1 Syed Zeeshan Haider				

CS-3D

Day/Peri od	1	п	ш	1:15-1:45	IV	v
Monday	Data Structures 1 Muhammad Usman Joyia	Marketing Management 1 Syed Zeeshan Haider			Differential Equations 1 Muhammad Waqas Javed	
Tuesday		Discrete Structures 1 Usman Ghous			Differential Equations 1 Muhammad Waqas Javed	
Wednesday	Data Structures 1 Muhammad Usman Joyia	Discrete Structures 1 Usman Ghous	Data Structures - Lab 1 Saba Aslam	L U N C H	Data Structures - Lab 1 Saba Aslam	
Thursday	Computer Orgnaization and Assembly Language - Lab 1 Ali Raza				Marketing Management 1 Syed Zeeshan Haider	
Friday						

CS-3E

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday		Finance & Accounting 1 Agha Mureed Ahmad Khan	Computer Organization and Assembly Language - Lab 1 Abuzar Ghafari		Computer Organization and Assembly Language - Lab 1 Abuzar Ghafari	
Tuesday					Differential Equations 1 Hayat Ali	
Wednesday				L U N C H		
Thursday						
Friday	Differential Equations 1 Hayat Ali				Finance & Accounting 1 Agha Mureed Ahmad Khan	

CS-5A

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday	Web Programming 1 Muhammad Shahrose Khan		Computer Networks - Lab 1 Ayesha Liaqat		Computer Networks - Lab 1 Ayesha Liaqat	
Tuesday		Software Design and Analysis 1 Dr. Muhammad Bilal				Theory of Automata 1 Anmol Bilal
Wednesday		Computer Networks 1 Masood Habib	Probability and Statistics 1 Haris Khurram	L U N C H	Probability and Statistics 1 Haris Khurram	
Thursday			Theory of Automata 1 Anmol Bilal		Web Programming 1 Muhammad Shahrose Khan	Software Design and Analysis 1 Dr. Muhammad Bilal
Friday					Computer Networks 1 Masood Habib	

CS-5B

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday		Computer Networks 1 Dr. Bilal Khan				Theory of Automata 1 Anmol Bilal
Tuesday	Software Design and Analysis 1 Dr. Muhammad Bilal	Computer Networks 1 Dr. Bilal Khan	Software Design and Analysis 1 Dr. Muhammad Bilal			
Wednesday			Computer Networks - Lab 1 Ayesha Liaqat	L U N C H	Computer Networks - Lab 1 Ayesha Liaqat	
Thursday			Web Programming 1 Muhammad Shahrose Khan		Web Programming 1 Muhammad Shahrose Khan	
Friday	Marketing Management 1 Hafiz M.Zeeshan Raza		Theory of Automata 1 Anmol Bilal			Marketing Management 1 Hafiz M.Zeeshan Raza

CS-5C

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday		Computer Networks 1 Dr. Bilal Khan			Theory of Automata Numan Shafi	1
Tuesday	Computer Networks - Lab Sumaira Mustafa	1			Advanced Programming 1 Awais Azam	
Wednesday	Advanced Programming 1 Awais Azam			L U N C H		Computer Networks 1 Dr. Bilal Khan
Thursday		Software Design and Analysis 1 Dr. Uzair Iqbal				
Friday	Software Design and Analysis 1 Dr. Uzair Iqbal		Probability and Statistics 1 Haris Khurram		Probability and Statistics 1 Haris Khurram	

CS-5D

Day/Period	I	11	ш	1:15-1:45	IV	v
Monday			Psychology 1 Aisha Bano			Discrete Structures 1 Usman Ghous Operating System 1 Usman Ghous
Tuesday	Database Systems 1 Saqib Hayat				Database Systems - Lab Saqib Hayat	1
Wednesday	Design and Analysis of Algorithms 1 Shoaib Saleem			L U N C H	Psychology 1 Aisha Bano	
Thursday	Theory of Automata 1 Numan Shafi		Design and Analysis of Algorithms 1 Shoaib Saleem Discrete Structures 1 Usman Ghous		Operating Systems - Lab Muhammad Haseeb Arshad	1 I
Friday	Theory of Automata 1 Numan Shafi				Operating System 1 Usman Ghous	Database Systems 1 Saqib Hayat

CS-5E

Day/Period	I	11	ш	1:15-1:45	IV	v
Monday						
Tuesday	Database Systems - Lab 1 Muhammad Shahrose Khan Design and Analysis of Algorithms 1 Shoaib Saleem	Database Systems - Lab 1 Muhammad Shahrose Khan			Theory of Automata 1 Numan Shafi	Psychology 1 Aisha Bano
Wednesday	Database Systems 1 Aliza Saeed		Theory of Automata 1 Numan Shafi	L U N C H		Database Systems 1 Aliza Saeed
Thursday	Design and Analysis of Algorithms 1 Shoaib Saleem	Operating Systems - Lab Muhammad Yousaf	1			
Friday						Psychology 1 Aisha Bano

CS-7A

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday		Data Mining 1 Dr. Rabia Maqsood	Artificial Intelligence 1 Dr. Shahnawaz Qureshi			Professional Practices in IT 1 Rizwan ul Haq
Tuesday	Software Engineering 1 Awais Azam					
Wednesday		Information Security 1 Dr. Danish Shehzad		L U N C H	Software Engineering 1 Awais Azam	Information Security 1 Dr. Danish Shehzad
Thursday			Artificial Intelligence - Lab 1 Saba Aslam		Artificial Intelligence - Lab 1 Saba Aslam	Data Mining 1 Dr. Rabia Maqsood
Friday	Data Science Adeel Ashraf Cheema	1	Artificial Intelligence 1 Dr. Shahnawaz Qureshi			Professional Practices in IT 1 Rizwan ul Haq

CS-7B

Day/Peri od	I	п	ш	1:15-1:45	IV	v
Monday		Software Engineering 1 Awais Azam			Information Security 1 Dr. Danish Shehzad	
Tuesday	Data Mining 1 Nasreen Akhtar	Data Science 1 Adeel Ashraf Cheema				Professional Practices in IT 1 Masood Habib
Wednesday			Software Engineering 1 Awais Azam	L U N C H		Information Security 1 Dr. Danish Shehzad
Thursday			Professional Practices in IT 1 Masood Habib			
Friday					Data Science 1 Adeel Ashraf Cheema	Data Mining 1 Nasreen Akhtar

CS-7C

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday	Applied Machine Learning 1 Dr. Hashim Yasin					Applied Machine Learning 1 Dr. Hashim Yasin
Tuesday						Information Security 1 Dr. Irfan ul Haq
Wednesday				L U N C H		
Thursday	Software for Mobile Devices - Lab 1 Tahir Farooq					Professional Practices in IT 1 Masood Habib
Friday					Information Security 1 Dr. Irfan ul Haq	Professional Practices in IT 1 Masood Habib

CS-7D

	ı					1
Day/Period	I	11	ш	1:15-1:45	IV	V
Monday	Applied Machine Learning 1 Dr. Hashim Yasin					
Tuesday	Professional Practices in IT 1 Tehreem Aslam		Software for Mobile Devices - Lab 1 Tahir Farooq		Software for Mobile Devices - Lab 1 Tahir Farooq	
Wednesday			Applied Machine Learning 1 Dr. Hashim Yasin	L U N C H		
Thursday						Professional Practices in IT 1 Tehreem Aslam
Friday		Information Security Dr. Muhammad Umar Aftal	1			

CS-7E

Day/Peri od	I	п	ш	1:15-1:45	IV	v
Monday			Fundamentals of Software Project Management 1 Dr. Muhammad Bilal			
Tuesday	Software Testing 1 Dr. Uzair Iqbal					
Wednesday		Information Security 1 Dr. Muhammad Umar Aftab	Professional Practices in IT 1 Tehreem Aslam	L U N C H	Fundamentals of Software Project Management 1 Dr. Muhammad Bilal	Information Security 1 Dr. Muhammad Umar Aftab
Thursday						Professional Practices in IT 1 Tehreem Aslam
Friday		Software Testing 1 Dr. Uzair Iqbal				

CS-7F

Day/Period	I	11	ш	1:15-1:45	IV	v
Monday						
Tuesday	Software Testing 1 Dr. Uzair Iqbal					
Wednesday				L U N C H		
Thursday		Software Testing 1 Dr. Uzair Iqbal				
Friday	Remote Sensing and GIS 1 Dr M. Shahzad Sarfraz				Remote Sensing and GIS 1 Dr M. Shahzad Sarfraz	

CS-9A

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday					Computer Architecture 1 Muhammad Usman Joyia	
Tuesday	Software for Mobile Devices - Lab No-Teacher				Computer Architecture 1 Muhammad Usman Joyia	
Wednesday				L U N C H		
Thursday						
Friday						

SE-1A

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday	English Composition and C	Comprehension - Lab 1	English Composition and Comprehension - Lab 1 Ehtasham-Ul-Haq		English Composition and Comprehension - Lab 1 Ehtasham-Ul-Haq	English Composition and Comprehension 1 Sadia Ashfaq
Tuesday	Calculus and Analytical Geometry 1 Bushra Ni az	English Composition and Comprehension 1 Farah Iqbal	Pakistan Studies 1 Asma Yaqoob			Pakistan Studies 1 Asma Yaqoob
Wednesday	Programming Fundamentals - Lab Sumaira Mustafa		Calculus and Analytical Geometry 1 Bushra Niaz	L U N C H	Applied Physics 1 Waheed Ahmad	
Thursday	Introduction to Information and Communication Technology - Lab 1 Umar Naseer		Programming Fundamentals 1 Sumaira Mustafa			
Friday	Programming Fundamentals 1 Sumaira Mustafa	Applied Physics 1 Waheed Ahmad	English Composition and Comprehension 1 Farah Iqbal English Composition and Comprehension 1 Sadia Ashfaq			

SE-1B

Day/Peri od	I	п	ш	1:15-1:45	IV	v
Monday	Calculus and Analytical Geometry 1 Bushra Niaz	Introduction to Information and Communication Technology - Lab 1 Muhammad Haseeb Arshad				Applied Physics 1 Dr. Arslan Ahmed Amin
Tuesday		Pakistan Studies 1 Zainab Javeed			Programming Fundamentals - Lab Aliza Saeed	
Wednesday	English Composition and Comprehension 1 Rida Akram	English Composition and Comprehension - Lab 1 Sadia Ashfaq		L U N C H		English Composition and Comprehension 1 Rida Akram
Thursday	English Composition and Comprehension - Lab 1 Farah Iqbal English Composition and Comprehension 1 Muhammad Iqbal	English Composition and Comprehension - Lab 1 Farah Iqbal	Applied Physics 1 Dr. Arslan Ahmed Amin		Programming Fundamentals 1 Aliza Saced	
Friday	English Composition and Comprehension 1 Muhammad Iqbal		Calculus and Analytical Geometry 1 Bushra Niaz		Programming Fundamentals 1 Aliza Saeed	

SE-3A

Day/Period	I	11	ш	1:15-1:45	IV	v
Monday		Software Requirement Engineering 1 Pariwish Touseef			Data Structures 1 Muhammad Usman Joyia	Human Computer Interaction 1 Dr. Shahnawaz Qureshi
Tuesday	Human Computer Interaction 1 Dr. Shahnawaz Qureshi	Software Requirement Engineering 1 Pariwish Touseef			Data Structures - Lab Aqsa Younas	1
Wednesday	Marketing Management 1 Hafiz M.Zeeshan Raza		Object Oriented Programming - Lab 1 Muhammad Yousaf	L U N C H	Object Oriented Programming - Lab 1 Muhammad Yousaf	Marketing Management 1 Hafiz M.Zeeshan Raza
Thursday	Linear Algebra 1 Ghilmana Sarmad	Object Oriented Programming 1 Dr Usman Habib	Linear Algebra 1 Ghilmana Sarmad		Data Structures 1 Muhammad Usman Joyia	
Friday						Object Oriented Programming 1 Dr Usman Habib

SE-3B

Day/Period	I	п	ш	1:15-1:45	IV	v
Monday		Data Structures - Lab Asif Ameer	1		Finance & Accounting 1 Muhammad Nasif	
Tuesday		Data Structures 1 Asif Ameer			Human Computer Interaction 1 Dr. Shahnawaz Qureshi	
Wednesday				L U N C H		Data Structures 1 Asif Ameer
Thursday	Linear Algebra 1 Ghilmana Sarmad		Software Requirement Engineering 1 Pariwish Touseef		Linear Algebra 1 Ghilmana Sarmad	Software Requirement Engineering 1 Pariwish Touseef
Friday	Human Computer Interaction 1 Dr. Shahnawaz Qureshi		Finance & Accounting 1 Muhammad Nasif			

SE-5A

Day/Peri od	I	п	ш	1:15-1:45	IV	v
Monday	Database Systems - Lab Nasreen Akhtar	1	Technical and Business Writing 1 Muhammad Nouman Iftikhar		Software Construction and Muhammad Azeem Iftikha	1
Tuesday		Technical and Business Writing 1 Muhammad Nouman Iftikhar	Software Quality Engineering 1 Tehreem Aslam		Software Quality Engineering 1 Tehreem Aslam	Operation Research 1 Dr. Muhammad Imran Babar
Wednesday		Operating Systems - Lab Muhammad Yousaf	1	L U N C H	Operating Systems 1 Muhammad Husnain	Database Systems 1 Nasreen Akhtar
Thursday	Probability and Statistics 1 Haris Khurram					Operating Systems 1 Muhammad Husnain
Friday	Software Construction and Development 1 Dr. Affan Rauf	Probability and Statistics 1 Haris Khurram	Database Systems 1 Nasreen Akhtar		Software Construction and Development 1 Dr. Affan Rauf	Operation Research 1 Dr. Muhammad Imran Babar

SE-5B

Day/Period	I	11	ш	1:15-1:45	IV	v
Monday					Technical and Business Writing 1 Muhammad Nouman Iftikhar	
Tuesday					Software Quality Engineering 1 Abdul Qadeer Bilal	Operation Research 1 Dr. Muhammad Imran Babar
Wednesday			Probability and Statistics 1 Haris Khurram	L U N C H		
Thursday	Software Construction and Development 1 Dr. Affan Rauf				Software Construction and Muhammad Azeem Iftikha	1
Friday	Technical and Business Writing 1 Muhammad Nouman Iftikhar	Software Quality Engineering 1 Abdul Qadeer Bilal	Software Construction and Development 1 Dr. Affan Rauf		Probability and Statistics 1 Haris Khurram	Operation Research 1 Dr. Muhammad Imran Babar