Department of Humanities and Languages	**Programme:** **B.B.A./ B.B.A. (FS)/ B.Com.** **B. C.A/ B. Sc. (Computer Science)** **B. C. A. (CTIS)/ B.F.A (Animation and VFX)** **B.Sc.(Cosmetic Science) B.Sc.(Fashion Design)** **B.Sc.(PCM/CBZ)**			
Course Code: TXFE101	**Year: First**		**Semester: I**	
Course: :Contemporary English I	**L**	**T**	**P**	**C**
	4	**--**	**--**	**4**
Theory: 3 Hrs./Week	**Max. University Theory Examination:50 Marks**			
Max. Time for Theory Exam: 3 Hrs.	**Continuous Internal Assessment:50 Marks**			

Course Objectives :	
	On completion of this course, student should be able to:
1	use acceptable English in academic writing
2	use English language in a more meaningful way with an enriched word power
3	communicate in a professional way using various communication strategies
4	read and comprehend the major points discussed in various types of written texts
5	make notes, write precise, letter and résumé

Course Outcomes		**Domain**	**Level**
CO1	Uses acceptable English in appropriate context	Cognitive, Psychomotor	Analyze, synthesize & Apply
CO2	Makes use of comprehensive and suitable vocabulary	Cognitive, Psychomotor & Affective	Understand, synthesize& Apply
CO3	Communicates professionally by using the strategies learnt	Cognitive, Psychomotor & Affective	Remembering, synthesize& Apply
CO4	Applies cognizance while comprehending various types of written texts	Cognitive, Psychomotor	Understand, Comprehend & Apply
CO5	Writes and speaks in English, precisely with clarity and accuracy	Cognitive, Psychomotor & Affective	Understand, Synthesize & Apply

Unit No.	**Syllabus**	**Hrs.**
1	**Listening Skills(Only for Internal Assessment)** **i.** Classroom listening (Teachers' reading of short stories, essays or reports)	**03**
2	**Vocabulary(These topics should be incorporated while teaching texts)** **i.** Word and Sense **ii.** Synonyms **iii.** Antonyms **iv.** Lexical webs	**08**

	v. Collocations **vi.** Affixation	
3	**Reading Skills (Understanding the text, skimming, scanning, speed reading, Reading charts and maps etc.)** **i.** The Eyes Have It – Ruskin Bond **ii.** The Astrologer's Day- R. K. Narayan	**07**
4	**Reading and Responding(Critical Appreciation, Paraphrasing and Analysing)** **i.** Where the Mind is Without Fear – Rabindranath Tagore **ii.** The Road Not Taken- Robert Frost **iii.** Night of the Scorpion – Nissim Ezekiel	**08**
5	**Grammar (LSRW Skills) (These topics should be incorporated while teaching texts)** **i.** Parts of Speech **ii.** Tenses	**07**
6	**Speaking Skills(Conversational Skills)** **i.** Greetings **ii.** Introducing Yourself and Others **iii.** Asking for Information **iv.** Requesting **v.** Inviting **vi.** Group Discussion **vii.** Interview Skills	**07**
7	**Writing Skills** **i.** Paragraph Writing **ii.** Letter - Informal/Formal **iii.** Email Writing	**08**
	Total	**48**

Resources	
Recommended Books	**1.Wren and Martin:** High School English Grammar and Composition **2.G. Radhakrishna, Pillai, K. Rajeevan**. Spoken English for You. CIEFL. Emerald Publication. **3.K. S. Smita, Annie Pothen**. English Conversational Practice. Sterling Publication Pvt. Ltd. **4.Dr. Saraswati**. Success with Spoken English for Undergraduate **5.Tickoo and Subramaniam:** A Functional Grammar with Usage and Composition **6.Ruskin Bond**, Eyes Have It **7.R. K. Narayan**, The Astrologer's Day **8.Rabindranath Tagore**, Where the Mind is Without Fear

	9.Robert Frost, The Road Not Taken **10.Nissim Ezekiel**, Night of the Scorpion
Reference Books	**1. Murphy, Raymond:** Essential English Grammar, Cambridge University Press **2.Bygate, M**. Speaking. Oxford: Oxford University Press. **3.Maison, Margaret M.:** Examine Your English **4.Fitikides, T.J.:** Common Mistakes in English **5.McCarthy. Michael:** English Vocabulary In Use and Felicity O. Dell

School: Computer Sciences and Engineering				Programme: BCA IILP
Course Code: TXCA102	Year: First Year			Semester - I
Course: Open Source Technology	L	T	P	C
	3	0	2	5
Theory: 4 Hrs/Week	Max. University Theory Examination:50 Marks			
Max. Time for Theory Exam.:3 Hrs	Continuous Internal Assessment:50 Marks			

Objectives	
1	To help students choose between the various open source licenses and learn their implications.
2	To help use the communication modes particular to the open source world throughparticipation.
3	To make students familiar with and adapt using the tools of open source development.
4	Write software that integrates and interacts with the open project's code.
5	Learn and understand open source software using case studies.

Unit Number	Details	Hours
1	Introduction: open Source, Free Software, Free Software vs. Open Source software, Public Domain Software, FOSS does not mean any cost. History: BSD, The Free Software Foundation and the GNU Project.	13
2	Open Source History, Initiatives, Principle and methodologies. Philosophy : Software Freedom, Open Source Development Model Licenses and Patents: What Is A License, Important FOSS Licenses (Apache,BSD,GPL, LGPL), copyrights and copylefts, Patents Economics of FOSS : Zero Marginal Cost, Income-generation opportunities, Problems with traditional commercial software, Internationalization	13
3	Case Studies: Apache, BSD, Linux, Mozilla (Firefox), Wikipedia, Joomla, GCC, Open Office.	11
4	Starting and Maintaining an Open Source Project, Open Source Hardware, Open Source Design, Open source Teaching. and Open source media.	11
	Open source vs. closed source Open source government, Open source ethics.	12

5	Social and Financial impacts of open source technology, Shared software, Shared source	
	Total	**60**

Resources	
Recommended Books	1. Cathedral And Bazaar By Eric Raymond 2. Code Reading: The Open Source Perspective By DiomidisSpinellis. 3. Fundamentals Of Open Source Software by M.N. Rao, PHI publishers.
Reference Books	1. Producing Open Source Software by Karl Fogel.

School: Computer Sciences & Engineering	Programme: BCA IILP			
Course Code: TXCA101	Year: First Year Semester - I			
Course: Problem Solving Technique using C	L	T	P	C
	3	--	4	5
Theory: 3Hrs/Week	Max. University Theory Examination: 50 Marks			
Max. Time for Theory Exam.:3 Hrs	Continuous Internal Assessment:50 Marks			

Objectives	
1	To understand the general Problem Solving Concepts and Techniques
2	Learntomap problems to programming features ofC
3	To learn the programming logic, use of programming instruction, syntax and programming structure
4	Create foundation for students to learn other complex programming languages like C++,Java etc.

Course Outcomes	
On successful completion of the course students will be able to:	
1	Understanding the concept of Problem Solving
2	Understand the fundamentals of C programming
3	Implement different Operations on arrays.
4	Write C program for simple applications of real life using structures and files
5	Implement file Operations in C programming for a given application

Unit Number	Details	Hours
1	**General Problem Solving Concepts**-Types of problems, problems solving with computers, difficulties with problem solving, programming language as tools: Machine Languages, Assembly Languages, High Level Languages Translators- Assembler, Compiler, Interpreter	10
2	**Fundamentals of „C Language":** Structure of c program, Constants, Variables, Operators and Expressions, Standards and Formatted statements, Keywords, Data Types: int, char, float, array, structure, union etc and Identifiers.	12
3	**Control Structures**: Introduction, Decision making with if – statement, if-else and Nested if, while and do-while, for loop. Jump statements: break, continue, goto statement	9
4	**Functions:** Introduction to Functions, Function Declaration, Function Categories, Standard Functions, Parameters and Parameter Passing, Call – by value/reference, Recursion, Global and Local Variables,	8

	Storage classes. **Arrays:** Introduction to Arrays, Array Declaration, Types of Array, Memory Representation, Strings, String handling functions.	
5	**Pointers:** Introduction to Pointers, Address operator and pointers, Declaring and Initializing pointers, Assignment through pointers, Pointers and Arrays. **Files:** Introduction, Creating a data file, opening and closing a data file, processing a data file.	**9**
	Total	**48**

Resources	
Recommended Books	1. Let us C,Yashvant P Kanetkar, Seventh Edition, BPB Publications, New Delhi. 2. Programming in C, Byron S. Gottfried, Second Edition, McGraw Hills. 3. Programming in ANSI C, E. Balagurusamy, Fourth Edition, Tata McGraw Hill
Reference Books	1. The C Programming Language, Kernighan &Richie, Second Edition, PHI Publication

School: Computer Sciences and Engineering	Programme: BCA IILP			
Course Code: TXCA101	Year: First Year Semester :I			
Course: :-Lab Course based on problem Solving Technique using C	L	T	P	C
	--	--	4	2
Practical: UG - 4 Hrs/Batch (20 Students)	Practical Examination: 25 Marks			
	Formative CIA/Term Work: 25 Marks			

Practical Objective	
1	This will give hands on practice to student about programming language C.
2	Understand the basic concept of C Programming, and its different modules that includes conditional and looping expressions, Arrays, Strings, Functions, Pointers, Structures and File programming
3	Acquire knowledge about the basic concept of writing a program
4	Role of Functions involving the idea of modularity

Set of Suggested assignment list is provided in 3 groups – A, B, C.
Instructor is suggested to design assignment list by selecting/ designing at least 12 suitable assignments as a study assignments.
1.At least 6 assignments from group A.
2.At least 4 assignments from group B.
3.At least 2 assignments from group C.

Sr. No.	Description
	Group A: (Any SIX Assignments)
1	Write a Program to find whether a given number is prime number or not.
2	Write a C Program to generate and print first N FIBONACCI numbers.
3	Write a C Program to read two matrices and perform addition and subtractions of two matrices.
4	Write a C Program to input numbers and to find mean variance and standard deviation.
5	Write a Program to find the root of the given quadratic equation using switch case.
6	Write a C Program that reverse a given integer number and check whether the number is palindrome or not.
7	Write a Program to find the GCD and LCM of two integer numbers
8	Write a C Program to read a string and check whether it is palindrome or not
9	Write a Program to find the factorial of a number using function
	Group B: (Any FOUR Assignments)

10	Write a C Program to find if a character is alphabetic or numeric or special character.
11	Write a C Program to compute the sum of even numbers and the sum of odd numbers using a function.
12	Write a C Program to accept a sentence and convert all lowercase characters to uppercase and vice-versa
13	Write a C Program to find trace and normal of a square matrix using functions
14	Write a Program to accept different goods with the number, price and date of purchase and display them.
15	Write a C Program to find the length of a string without using the built – in function.
	Group C: (Any TWO Assignments)
16	Copying the contents of one file into another.
17	Write a C program to accept the reverse of a string using pointers.
18	Write a C program to store Chemistry subject test marks of N students in an array and find the Minimum and Maximum score. Test maximum marks= 20. Your program should accept marks ranging between 0 to 20 only.

Note: - Practical/ Oral/ Presentations

Practical/ Oral/ Presentations shall be conducted and assessed jointly by internal and external examiners. The performance Practical/ Oral/ Presentations shall be assessed by at least one pair of examiner appointed as examiner by the university. The examiners will prepare the mark/ Grade sheet in the format as specified by the university, the authenticated and seal it. Seal enveloped shall be submitted to the head of the department or authorized person.

School: Computer Sciences & Engineering				Programme: BCA IILP
Course Code: TXCA103	Year: First Year			Semester – I
Course: Discrete Mathematics	L	T	P	C
	3	1	--	4
Theory: 3 Hrs/Week	Max. University Theory Examination: 50 Marks			
Max. Time for Theory Exam.:3 Hrs	Continuous Internal Assessment:50 Marks			

Objectives	
	On completion of this course, student should be able to:
1	To Demonstrate a working knowledge of set notation and elementary set theory, recognize the connection between set operations and logic
2	To study Relations, its Closure and apply algorithms to prove the relations
3	To study Functions and its types and Apply counting principles to solve problems
4	To determine Semi Groups and Groups and Solve problems on Lattices
5	To study Graph Theory and Trees and analyze Euler and Hamiltonian Paths and Circuits.

Outcomes	
	On completion of this course, student should be able to:
1	The students will be able to perform various operations on sets
2	To understand and solve problems related to relations and functions
3	To comprehend with groups and its properties
4	To form trees and graphs and solve problems on it
5	To apply principle of discrete structures for computational calculations

Unit Number	Details	Hours
1	**Set Theory**: Definitions: Sets, Subsets, Fundamental laws of sets and examples, Types of sets, Power set, Complement of a set, Operations on sets, Venn Diagram & Examples. Principle of inclusion and exclusion.	**10**
2	**Relations:** Introduction to Relation,Properties of Binary Relations, Closure of relations, Warshall's algorithm, Equivalence Relations and partitions.	**9**
3	**Functions:** Definition, types of function, Invertible functions composition of functions. **Counting** - Permutation, Combinations, The pigeonhole principle, Recurrence relation, Mathematical Induction..	**9**
	Semi Groups &Groups: Binary operations, Semi groups, isomorphism	**9**

4	and Homomorphism, Product and Quotient of semi groups, Groups, subgroups, products and Quotient of groups. **Lattices: -** Lattice concepts, isomorphic Lattices, Properties of lattices, Finite Boolean algebras.	
5	**Graph Theory:** Basic concepts, types of graphs, Representation of graph in memory, Euler path and circuits, Hamiltonian Path and circuits. **Trees:** Basic concepts, Labeled trees, Undirected trees.	**11**
	Total	**48**

Resources	
Recommended Books	1. Kolman, Busby and Ross, "Discrete mathematical Structures and graph theory" 2. Alan Doerr, K. Levasseur , "Applied discrete structure for computer science", Galgotia publications, 1988 3. Discrete Mathematics By Norman Biggs
Reference Books	1. Trembley&Manohar, "Discrete mathematical Structures with application to computer science", McGraw Hill, 1987. 2. Lipschutz, Lipson ,"Discrete Mathematics", Schaum's Outlines

Document Ref.	Rev. No./ Date	Issue No./ Date	Prepared By	Approved By
SUN/SOSS/HL/_____/_____/____				

School: Computer Sciences & Engineering	Programme: BCA IILP			
Course Code: TXCA104	Year: First Year Semester - I			
Course: Introduction to Operating System and Office365	L	T	P	C
	3	--	--	3
Theory: 3Hrs/Week	Max. University Theory Examination: 50 Marks			
Max. Time for Theory Exam: 3 Hrs.	Continuous Internal Assessment:50 Marks			

Objectives	
1	To understand basics of different types Operating system
2	To Learn basics elements of operating system
3	Use Microsoft Office 365 to promote, support, andmodel creative thinking and innovation.
4	Use Sky drive to share resource files across groups and user accounts.
5	Understand the concept of groups in Office365

Course Outcomes	
On successful completion of the course students will be able to:	
1	To understand the basics of different types Operating system
2	To understand the concepts of Operating System
3	Use Microsoft Office 365 to promote, support, andmodel creative thinking and innovation,.
4	To learn the basic for Using Sky drive to share resource files across groups and user accounts.
5	Create and manage groups in Office365

Unit Number	Details	Hours
1	**Introduction to Operating System:**Definition, Need of Operating System, functions of operating system, Popular Operating Systems, difference between windows and Linux operating system, introduction to GUI and Command line	9
2	**Operating system Basics:** Architecture of Operating System, Memory, Types of Memory, Goals, Process, Context switch, Access and Security aspects: Security threat, attack on security, Computer worms, Computer virus	12
3	**Introduction to Microsoft Office 365: Microsoft Office 365:** Office on demand, Office Web Apps, SksyDrive and SkyDrive Pro, Most Used Office Applications, Creating a Microsoft Account, Managing Account Settings.	9
4	**Microsoft Skydrive and SkyDrive Pro:** Getting Started with SkyDrive, Creating a Document, Sharing a Document, Using SkyDrive	7

	App, Uploading Files from Your Computer, Uploading Files on the Web, Getting Started with SkyDrive Pro, Creating a Document, Sharing a Document, Uploading Files on the Web, Checking Your E-mail.	
5	**Configuring groups in Office365:**Introduction, creating and working with security groups in Office365, creating office365 groups, managing security group membership in office365, Mofifying the membership and ownership in Office365 groups, creating Distribution list in Office365, Adding and Removing distribution list owners.	**8**
	Total	**45**

Resources	
Recommended Books	1. Kevin Wilson, Using Office 365: With windows 8, 2014, Apress, 978-1430266853. 2. A Silberschatz, P.B. Galvin, G. Gagne, Operating Systems Concepts, 8th Edition, John Wiley Publications 2008.
Reference Books	1. AchyutGodbole," Operating Systems", Mac Graw Hill Publications 2. William Stanek "Office 365 & Exchange Online: Essentials for Administration (IT Pro Solutions)",IT Pro Solutions

Objectives	
1	To understand the basics of computer system.
2	To understand the Fundamental algorithm.
3	To understand the concepts Operating Systems & its functions.
4	Use Microsoft Office 365 to promote, support, andmodel creative thinking and innovation, Use Sky drive to share resource files across groups and user accounts.

Set of Suggested assignment list is provided in 3 groups – A, B, C.

Instructor is suggested to design assignment list by selecting/ designing at least 12 suitable assignments as a study assignments.

1.At least 6 assignments from group A.

2.At least 4 assignments from group B.

3.At least 2 assignments from group C.

Sr. No.	**Description**

<table>
<tr><td></td><td>Group A: (Any Six Assignments)</td></tr>
<tr><td>1</td><td>Identify desktop and server by its type and verify its specification.</td></tr>
<tr><td>2</td><td>Identify hardware components on motherboard.</td></tr>
<tr><td>3</td><td>Install operating system-windows family (windows 7/ windows 10)</td></tr>
<tr><td>4</td><td>Partition and manage hard disk, format hard drives with different file systems. Troubleshoot Hard disk problem.</td></tr>
<tr><td>5</td><td>Install Local Printer and share printer in network.</td></tr>
<tr><td>6</td><td>Assemble and disassemble desktop system.</td></tr>
<tr><td>7</td><td>Write a C program to find factorial of n integer.</td></tr>
<tr><td></td><td>Group B: (Any Four Assignments)</td></tr>
<tr><td>8</td><td>Create the following one page documents in MS-Word.
a) Compose a note inviting friends to a get-together at your house, including a list of things to bring with them.
b) Design a certificate in landscape orientation with a border around the document.</td></tr>
<tr><td>9</td><td>XYZ Publications plans to release a new book designed as per your syllabus. Design the first page of the book as per the given specifications in MS-word.
a) The title of the book should appear in bold using 20-point Arial font.
b) The name of the author and his qualifications should be in the center of the page in 16-point Arial font.
c) At the bottom of the document should be the name of the publisher and address in 16-point Times New Roman.
d) The details of the offices of the publisher (only location) should appear in the footer.</td></tr>
<tr><td>10</td><td>Create the following document in MS-Word: A newsletter with a headline and 2 columns in portrait orientation, including at least one image surrounded by text.</td></tr>
<tr><td>11</td><td>The following table (MS-Excel) gives a year wise sale figure of five salesmen in Rs.
<table>
<tr><td>Salesman</td><td>2000</td><td>2001</td><td>2002</td><td>2003</td></tr>
<tr><td>S1</td><td>10000</td><td>12000</td><td>20000</td><td>50000</td></tr>
<tr><td>S2</td><td>15000</td><td>18000</td><td>50000</td><td>60000</td></tr>
<tr><td>S3</td><td>20000</td><td>22000</td><td>70000</td><td>70000</td></tr>
<tr><td>S4</td><td>30000</td><td>30000</td><td>100000</td><td>80000</td></tr>
<tr><td>S5</td><td>40000</td><td>45000</td><td>125000</td><td>90000</td></tr>
</table>
i. Calculate total sale year wise.
ii. Calculate the net sales made by each salesman
iii. Calculate the commission for each salesman under the condition :-
a) If total sales is greater than Rs. 4, 00,000/-, then commission is 5% of total sale made by the salesman.
b) Otherwise, 2% of total sale.
iv. Calculate the maximum sale made by each salesman.
v. Calculate the maximum sale made in each year.
vi. Draw a bar graph representing the sale made by each salesman.
vii. Draw a pie graph representing the sale made by salesmen in year 2001.</td></tr>
<tr><td>12</td><td>Consider the following employee worksheet in MS-Excel :-
<table>
<tr><td>Full Name (First Last)</td><td>Grade 1/2/3</td><td>Basic Salary</td><td>HRA</td><td>PF</td><td>Gross</td><td>Net</td><td>(VA) Vehicle Allowance</td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
</table></td></tr>
</table>

	Grade HRA % (of Basic) 1 40% 2 35% 3 30% Gross = Basic + HRA + VA Net = Gross –PF PF is 8% for all Grades VA is 15000, 10000 and 7000 for Grades 1, 2 and 3. i. Find max, min and average salary of employees in respective Grade ii. Count no. of people where VA>HRA
	Group C: (Any Two Assignments)
13	Create five Power Point slides to give advantages/disadvantages of computer, application of computers and logical structure of computer.
14	Create five Power point slides. Each slide should support different format. In these slides explain areas of applications of IT. Make slide transition time as 10 seconds.
15	Demonstrate Local Area Network.

Term Work:
Term Work assessment shall be conducted for the Project, Tutorials and Seminar. Term work is continuous assessment based on work done, submission of work in the form of report/journal, timely completion, attendance, and understanding. It should be assessed by subject teacher of the institute. At the end of the semester, the final grade for a Term Work shall be assigned based on the performance of the student and is to be submitted to the University.

Notes	
1	The experiments from the regular practical syllabus will be performed (15 Marks).
2	The regular attendance of students during the syllabus practical course will be monitored and marks will be given accordingly (5 Marks).
3	Good Laboratory Practices (5 Marks)

Practical/Oral/Presentation:
Practical shall be conducted and assessed jointly by internal and external examiners. The performance in the Practical examination shall be assessed by at least a pair of examiners appointed as examiners by the University. The examiners will prepare the mark/grade sheet in the format as specified by the University, authenticate and seal it. Sealed envelope shall be submitted

to the head of the department or authorized person.

Notes	
1	One experiment from the regular practical syllabus will be conducted. (Total 15 Marks).
2	Complete laboratory journal (05 Marks).
3	Viva-voce (05 Marks).

School: Computer Sciences & Engineering			Programme: BCA IILP	
Course Code: TXCA102	Year : First Year		Semester - I	
Course: Lab Course based on Open Source Technology	L	T	P	C
	--	--	2	1
Practical: UG - 4 Hrs./Batch (20 Students)	Practical Examination: 25Marks			
	Formative CIA/Term Work: 25 Marks			

Objectives	
1	Able to recognize the benefits and features of Open Source Technology.
2	Interpret, Contrast and compare open source products among themselves
3	Understand and demonstrate Version Control System along with its commands

Set of Suggested assignment list is provided in 3 groups – A, B, C.
Instructor is suggested to design assignment list by selecting/ designing at least 12 suitable assignments
as a study assignments.

- At least 6 assignments from group A.
- At least 4 assignments from group B.
- At least 2 assignments from group C.

Sr. No.	Description
	Group A: Computer Networks (Any SIX Assignments)
1	Case study on Open Source software
2	Perform Kernel Configuration, compilation and Installation
3	Study of Virtualization environment
4	Implement Compilation from source
5	Perform Packet management system
6	Perform Installation of software packages
7	Write user space driving using fuse
	Group B: (Any Four Assignments)
8	Implement GUI Programming
9	Implement Simple Applications using PHP
10	Perform Simple Applications using Python
11	Perform Setting up the Network Interface
12	Case study on PERL.
	Group C: (Any Two Assignments)
13	Implement Version Control system setup and usage
14	Perform Text Processing with PERL
15	Write PERL program to connect with MYSQL database.

Term Work:

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SUN/SOCSE/BCA/IILP/SEM I/2019	20/8/2019	28/11/2019		

Term Work assessment shall be conducted for the Project, Tutorials and Seminar. Term work is continuous assessment based on work done, submission of work in the form of report/journal, timely completion, attendance, and understanding. It should be assessed by subject teacher of the institute. At the end of the semester, the final grade for a Term Work shall be assigned based on the performance of the student and is to be submitted to the University.

Notes:	
1	The experiments from the regular practical syllabus will be performed (30 Marks).
2	The regular attendance of students during the syllabus practical course will be monitored and marks will be given accordingly (10 Marks).
3	Good Laboratory Practices (10 Marks)

Practical/Oral/Presentation:

Practical shall be conducted and assessed jointly by internal and external examiners. The performance in the Practical examination shall be assessed by at least a pair of examiners appointed as examiners by the University. The examiners will prepare the mark/grade sheet in the format as specified by the University, authenticate and seal it. Sealed envelope shall be submitted to the head of the department or authorized person.