MAULANA ABUL KALAM AZAD UNIVERSITY OF TECHNOLOGY, WEST BENGAL
NH-12 [Old NH-34], Simhat, Haringhata, Nadia -741249

Department of Information Technology (In-house)
Syllabus of Bachelor of Computer Application (BCA)
(Effective from academic session 2019-20)

Semester-1

Name of the Course: BCA **Subject:** Programming for Problem Solving & Programming for Problem Solving Lab			
Course Code: BCA101 + BCA191		**Semester: 1st**	
Duration: 36 Hours		**Maximum Marks: 100 + 100**	
Teaching Scheme		**Examination Scheme**	
Theory: 3 hrs./week		End Semester Exam: 70	
Tutorial: 0		Attendance : 5	
Practical: 4 hrs./week		Continuous Assessment: 25	
Credit: 3 + 2		Practical Sessional internal continuous evaluation: 40	
		Practical Sessional external examination: 60	
Aim:			
Sl. No.			
1	In-depth understanding of various concepts of programming language.		
2	Ability to read, understand and trace the execution of programs		
3	Skill to debug a program.		
4	Skill to write program code in C to solve real world problems.		
Objective:			
Sl. No.			
1	To introduce students to a powerful programming language		
2	To understand the basic structure of a program		
3	To gain knowledge of various programming errors.		
4	To enable the students to make flowchart and design an algorithm for a given problem.		
5	To enable the students to develop logics and programs		
Pre-Requisite:			
Sl. No.			
1	Understanding of basic mathematical logic.		
Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01	Introduction to Computers Computer Systems, Computing Environments, Computer Languages, Creating and Running Programs, Software Development, Flow charts. Number Systems: Binary, Octal, Decimal, Hexadecimal Introduction to C Language - Background, C Programs, Identifiers, Data Types, Variables, Constants, Input / Output Statements Arithmetic Operators and Expressions: Evaluating Expressions, Precedence and Associativity of Operators, Type Conversions.	6	10
02	Conditional Control Statements	8	10

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	Bitwise Operators, Relational and Logical Operators, If, If- Else, Switch- Statement and Examples. Loop Control Statements: For, While, DoWhile and Examples. Continue, Break and Goto statements Functions: Function Basics, User-defined Functions, Inter Function Communication, Standard Functions, Methods of Parameter Passing. Recursion- Recursive Functions.. Storage Classes: Auto, Register, Static, Extern, Scope Rules, and Type Qualifiers.		
03	Preprocessors and Arrays Preprocessor Commands Arrays - Concepts, Using Arrays in C, Inter-Function Communication, Array Applications, Two- Dimensional Arrays, Multidimensional Arrays, Linear and Binary Search, Selection and Bubble Sort.	8	10
04	Pointers Pointers for Inter-Function Communication, Pointers to Pointers, Compatibility, Lvalue and Rvalue, Arrays and Pointers, Pointer Arithmetic and Arrays, Passing an Array to a Function, Memory Allocation Functions, Array of Pointers, Programming Applications, Pointers to void, Pointers to Functions, Command Line Arguments. Strings - Concepts, C Strings, String Input/Output Functions, Arrays of Strings, String Manipulation Functions.	**8**	**20**
05	Structures and File Definition and Initialization of Structures, Accessing Structures, Nested Structures, Arrays of Structures, Structures and Functions, Pointers to Structures, Self Referential Structures, Unions, Type Definition (typedef), Enumerated Types. Input and Output: Introduction to Files, Modes of Files, Streams, Standard Library Input/Output Functions, Character Input/Output Functions.	**6**	**20**
	Sub Total:	**36**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:		**100**

Practical
Course Code: BCA191
Credit: 2
Skills to be developed:
Intellectual skills:

1. Ability to read, understand and write computer programs.
2. Ability to analyze problems and provide program based solutions.

List of Practical:

1. Write a c program to display the word "welcome".
2. Write a c program to take a variable int and input the value from the user and display it.
3. Write a c program to add 2 numbers entered by the user and display the result.
4. Write a c program to calculate the area and perimeter of a circle.
5. Write a C program to find maximum between two numbers.
6. Write a C program to check whether a number is divisible by 5 and 11 or not.
7. Write a C program to input angles of a triangle and check whether triangle is valid or not.

8. Write a C program to check whether a year is leap year or not.
9. Write a C program to input basic salary of an employee and calculate its Gross salary according to following:
   Basic Salary <= 10000 : HRA = 20%, DA = 80%
   Basic Salary <= 20000 : HRA = 25%, DA = 90%
   Basic Salary > 20000 : HRA = 30%, DA = 95%
10. Write a c program to print "welcome" 10 times.
11. Write a c program to print first n natural numbers using while loop.
12. Write a c program to print all the odd numbers in a given range.
13. Write a c program to add first n numbers using while loop.
14. Write a c program to print all numbers divisible by 3 or 5 in a given range.
15. Write a c program to add even numbers in a given range.
16. Write a c program to find the factorial of a given number.
17. Write a c program to find whether a number is prime or not.
18. Write a c program to print the reverse of a number.
19. Write a c program to add the digits of a number.
20. Write a c program to print the fibonacci series in a given range.
21. Write a c program to check whether a number is an Armstrong number or not.
22. Write a c program to find g.c.d. and l.c.m. of two numbers.

Assignments:

Based on the curriculum as covered by subject teacher.

List of Books

Text Books:

Name of Author	**Title of the Book**	**Edition/ISSN/ISBN**	**Name of the Publisher**
E. Balaguruswamy	Programming in ANSI C		Tata McGraw-Hill
Gary J. Bronson	A First Book of ANSI C	4th Edition	ACM
Reference Books:			
Byron Gottfried	Schaum's Outline of Programming with C		McGraw-Hill
Kenneth A. Reek	Pointers on C		Pearson
Brian W. Kernighan and Dennis M. Ritchie	The C Programming Language		Prentice Hall of India

List of equipment/apparatus for laboratory experiments:	
Sl. No.	
1.	Computer with moderate configuration

2.	A programming language compiler

End Semester Examination Scheme. Maximum Marks-70. Time allotted-3hrs.

Group	**Unit**	**Objective Questions** (MCQ only with the correct answer)		**Subjective Questions**			
		No of question to be set	Total Marks	No of question to be set	To answer	Marks per question	Total Marks
A	1 to 5	10	10				
B	1 to 5			5	3	5	70
C	1 to 5			5	3	15	

- Only multiple choice type question (MCQ) with one correct answer are to be set in the objective part.
- Specific instruction to the students to maintain the order in answering objective questions should be given on top of the question paper.

Examination Scheme for end semester examination:

Group	**Chapter**	**Marks of each question**	**Question to be set**	**Question to be answered**
A	**All**	**1**	**10**	**10**
B	**All**	**5**	**5**	**3**
C	**All**	**15**	**5**	**3**

Examination Scheme for Practical Sessional examination:

Practical Internal Sessional Continuous Evaluation

Internal Examination:

Five No of Experiments			

External Examination: Examiner-

Signed Lab Note Book(for five experiments)	**5*2=10**	
On Spot Experiment(one for each group consisting 5 students)	**10**	
Viva voce	**5**	

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Name of the Course: BCA **Subject:** Soft Skills & Soft Skills Lab	
Course Code: BCA102 + BCA192	**Semester: 1st**
Duration: 36 Hours	**Maximum Marks: 100 +100**
Teaching Scheme	**Examination Scheme**
Theory: 3 hrs./week	End Semester Exam: 70
Tutorial: 0	Attendance : 5
Practical: 4 hrs./week	Continuous Assessment: 25
Credit: 3 + 2	Practical Sessional internal continuous evaluation: 40
	Practical Sessional external examination: 60

Aim:	
Sl. No.	
1.	Ability to read English with ability to read English with understanding and decipher paragraph patterns, writer techniques and conclusions
2.	Skill to develop the ability to write English correctly and master the mechanics of writing the use of correct punctuation marks and capital letter
3.	Ability to understand English when it is spoken in various contexts.

Objective:	
Sl. No.	
1.	To enable the learner to communicate effectively and appropriately in real life situation
2.	To use English effectively for study purpose across the curriculum
3.	To use R,W,L,S and integrate the use of four language skills, Reading, writing , listening and speaking.
4.	To revise and reinforce structures already learnt.

Aim:	
Pre-Requisite:	
Sl. No.	
1.	Basic knowledge of English Language.

Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01	**Grammar** Correction of sentence, Vocabulary / word formation, Single word for a group of words, Fill in the blank, transformation of sentences, Structure of sentences – Active / Passive Voice – Direct / Indirect Narration.	**6**	**10**
02	**Essay Writing** Descriptive – Comparative – Argumentative – Thesis statement- Structure of opening / concluding paragraphs – Body of the essay.	**5**	**10**
03	**Reading Comprehension** Global – Contextual – Inferential – Select passages from recommended text .	**5**	**10**

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04	**Business Correspondence** Letter Writing – Formal.Drafting.Biodata- Resume′- Curriculum Vitae.	**5**	**10**
05	**Report Writing** Structure , Types of report – Practice Writing.	**5**	**10**
06	**Communication skills** Public Speaking skills , Features of effective speech, verbal-nonverbal.	**5**	**10**
07	**Group discussion** Group discussion – principle – practice .	**5**	**10**
	Sub Total:	**36**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:		**100**

Practical
Course Code: BCA192
Credit : 2
Skills to be developed:
Intellectual skills:

1. Skill to read, write and speak english efficiently.

List of Practical:

1. Honing ‘Listening Skill’ and its sub skills through Language Lab Audio device.
2. Honing ‘Speaking Skill’ and its sub skills.
3. Helping them master Linguistic/Paralinguistic features (Pronunciation/Phonetics/Voice modulation/ Stress/ Intonation/ Pitch & Accent) of connected speech.
4. Honing ‘Conversation Skill’ using Language Lab Audio –Visual input, Conversational Practice Sessions (Face to Face / via Telephone , Mobile phone & Role Play Mode).
5. Introducing ‘Group Discussion’ through audio –Visual input and acquainting them with key strategies for success.
6. GD Practice Sessions for helping them internalize basic Principles (turn- taking, creative intervention, by using correct body language, courtesies & other soft skills) of GD.
7. Honing ‘Reading Skills’ and its sub skills using Visual / Graphics/Diagrams /Chart Display/Technical/Non Technical Passages, Learning Global / Contextual / Inferential Comprehension.
8. Honing ‘Writing Skill’ and its sub skills by using Language Lab Audio –Visual input, Practice Sessions.

Assignments:
Based on the curriculum as covered by the subject teacher.

List of Books
Text Books:

Name of Author	Title of the Book	Edition/ISSN/ISBN	Name of the Publisher
Mark MaCormack	Communication		
John Metchell	How to write reports		

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S R Inthira & V Saraswathi	Enrich your English – a) Communication skills b) Academic skills		CIEFL & OUP
Reference Books:			
R.C. Sharma and K.Mohan	Business Correspondence and Report Writing		Tata McGraw Hill
L.Gartside	Model Business Letters		Pitman
List of equipment/apparatus for laboratory experiments:			
Sl. No.			
1	Computer with moderate configuration		
2	Audio visual Setup.		

End Semester Examination Scheme. Maximum Marks-70. Time allotted-3hrs.

Group	Unit	Objective Questions (MCQ only with the correct answer)		Subjective Questions			
		No of question to be set	Total Marks	No of question to be set	To answer	Marks per question	Total Marks
A	**1 to 8**	**10**	**10**				
B	**1 to 8**			**5**	**3**	**5**	**70**
C	**1 to 8**			**5**	**3**	**15**	

- Only multiple choice type question (MCQ) with one correct answer are to be set in the objective part.
- Specific instruction to the students to maintain the order in answering objective questions should be given on top of the question paper.

Examination Scheme for end semester examination:

Group	Chapter	Marks of each question	Question to be set	Question to be answered
A	**All**	**1**	**10**	**10**
B	**All**	**5**	**5**	**3**
C	**All**	**15**	**5**	**3**

Examination Scheme for Practical Sessional examination:

Practical Internal Sessional Continuous Evaluation

Internal Examination:

Five No of Experiments			

External Examination: Examiner-

Signed Lab Note Book(for five experiments)	**5*2=10**	
On Spot Experiment(one for each group consisting 5 students)	**10**	
Viva voce	**5**	

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Name of the Course: BCA **Subject:** Digital Electronics	
Course Code: BCA103	**Semester: 1st**
Duration: 48 Hours	**Maximum Marks: 100**
Teaching Scheme	**Examination Scheme**
Theory: 3 hrs./week	End Semester Exam: 70
Tutorial: 1 hrs./week	Attendance : 5
Practical: 0	Continuous Assessment: 25
Credit: 4	Practical Sessional internal continuous evaluation:
	Practical Sessional external examination:

Aim:	
Sl. No.	
1	To gain skill to build and troubleshoot digital logic circuits
2	To gain skill to use the methods of systematic reduction of Boolean expression using K-Map
3	To be able to interpret logic gates and its operations
4	Familiarization with semiconductor memories in electronics.
Objective:	
Sl. No.	
1	To gain basic knowledge of digital electronics circuits and its levels.
2	To understand and examine the structure of various number system and its conversation.
3	To learn about the basic requirements for a design application
4	To enable the students to understand,analyze and design various combinational and sequential circuits
5	To understand the logic functions, circuits, truth table and Boolean algebra expression
Pre-Requisite:	
Sl. No.	**None**

Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01	**Number Systems & Codes** Decimal Number, Binary Number, Octal Number, Hexadecimal Number, Conversion – Decimal to Binary, Binary to Decimal, Octal to Binary, Binary to Octal, Hexadecimal to Binary, Binary to Hexadecimal, Octal to Binary to Hexadecimal, Hexadecimal to Binary to Octal; Floating Point Number Representation, Conversion of Floating Point Numbers, Binary Arithmetic, 1's and 2's Complement, 9's and 10's Complement, Complement Arithmetic, BCD, BCD addition, BCD subtraction, Weighted Binary codes, Non-weighted codes, Parity checker and generator, Alphanumeric codes.	**5**	**10**
02	**Logic Gates** OR, AND, NOT, NAND, NOR, Exclusive – OR, Exclusive – NOR, Mixed logic.	**2**	**10**
03	**Boolean Algebra**	**4**	**10**

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	Boolean Logic Operations, Basic Law of Boolean Algebra, Demorgan's Theorem, Principle of Duality.		
04	**Minimization Techniques** Sum of Products, Product of Sums, Karnaugh Map [up to 4 variables].	**3**	**10**
05	**Multilevel Gate Network** Implementation of Multilevel Gate Network, Conversion to NAND-NAND and NOR-NOR Gate Networks.	**2**	**5**
06	**Arithmetic Circuits** Half Adder, Full Adder, Half Subtractor, Full Subtractor, Carry Look Ahead Adder, 4-Bit Parallel Adder	**5**	**5**
07	**Combinational Circuits** Basic 2-input and 4-input multiplexer, Demultiplexur, Basic binary decoder, BCD to binary converters, Binary to Gray code converters, Gray code to binary converters, Encoder.	**5**	**5**
08	**Sequential Circuits** Introduction to sequential circuit, Latch, SR Flip Flop, D Flip Flop, T Flip Flop, JK Flip Flop, Master Slave Flip Flop	**5**	**5**
09	**Basics of Counters** Asynchronous [Ripple or serial] counter, Synchronous [parallel] counter	**2**	**5**
10	**Basics of Registers** SISO, SIPO, PISO, PIPO, Universal Registers	**3**	**5**
	Sub Total:	**36**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:		**100**

Assignments:

Based on the curriculum as covered by subject teacher.

List of Books

Text Books:

Name of Author	Title of the Book	Edition/ISSN/ISBN	Name of the Publisher
Salivahan	Digital Circuit & Design		VIKAS
M. Morris. Mano & Michael D. Ciletti	Digital Design		PEARSON
Anand Kumar	Fundamentals of Digital Circuits		PHI

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Reference Books:			
Tokheim	Digital Electronics		TMH
S. Rangnekar	Digital Electronics		ISTE/EXCEL

End Semester Examination Scheme. Maximum Marks-70. Time allotted-3hrs.

Group	**Unit**	**Objective Questions** (MCQ only with the correct answer)		**Subjective Questions**			
		No of question to be set	Total Marks	No of question to be set	To answer	Marks per question	Total Marks
A	**1 to 10**	**10**	**10**				
B	**1 to 10**			**5**	**3**	**5**	**70**
C	**1 to 10**			**5**	**3**	**15**	

- Only multiple choice type question (MCQ) with one correct answer are to be set in the objective part.
- Specific instruction to the students to maintain the order in answering objective questions should be given on top of the question paper.

Examination Scheme for end semester examination:

Group	**Chapter**	**Marks of each question**	**Question to be set**	**Question to be answered**
A	**All**	**1**	**10**	**10**
B	**All**	**5**	**5**	**3**
C	**All**	**15**	**5**	**3**

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Name of the Course: BCA **Subject:** Basic Mathematical Computation	
Course Code: BCA104	**Semester: 1st**
Duration: 40 Hours	**Maximum Marks: 100**
Teaching Scheme	**Examination Scheme**
Theory: 3 hrs./week	End Semester Exam: 70
Tutorial: 1 hr./week	Attendance: 5
Practical:	Continuous Assessment: 25
Credit: 4	Practical Sessional internal continuous evaluation:
	Practical Sessional external examination:

Aim:	
Sl. No.	
1	To develop formal reasoning.
2	Create habit of raising questions
3	Knowledge regarding the use of Mathematics in Computer Science
4	Ability to communicate knowledge, capabilities and skills related to the computer engineer profession

Objective:	
Sl. No.	
1	To understand and solve mathematical problems
2	To impart knowledge regarding relevant topics .
3	To familiarize students with linear Algebra, differential and integral calculus, numerical methods and statistics.

Pre-Requisite:	
Sl. No.	
1.	Basic mathematical foundation.

Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01	**Linear Algebra** Determinant and its properties [up to third order], Minor and cofactors, Matrices, addition, multiplication and transpose of a matrix, Symmetric and skew-symmetric matrices and their properties, Adjoint, Inverse matrix, Solution of linear equations in three variables by Cramer's rule and matrix inversion method, Permutation and Combinations, Binomial theorem.	**12**	**20**
02	**Two Dimensional Geometry** Locus, Straight lines, Circle, Conic section. Transformation of axes, Plane polar curves.	**8**	**15**
03	**Differential Calculus** Limits of function and continuity, fundamental properties of continuous functions [without	**12**	**20**

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	proof], Derivatives, Geometric meaning of derivative, successive differentiation, Rolle's theorem, Mean value theorems, Taylor's and Maclaurin's theorem, Taylor's series, Functions of several variables, Limit and Continuity, Partial derivatives, Total differential, Euler's theorem on homogeneous functions of two variables. Tangents and normals.		
04	**Integral Calculus** Indefinite integrals, Definite integrals and their elementary properties, Definite integral as the limit of sum, Idea of improper integrals. Area under a plane curve.	**8**	**15**
	Sub Total:	**40**	**70**
	Internal Assessment Examination & Preparation of Semester Examination		**30**
	Total:		**100**

Assignments:

Based on the curriculum as covered by subject teacher.

List of Books

Text Books:

Name of Author	**Title of the Book**	**Edition/ISSN/ISBN**	**Name of the Publisher**
S. K. Mapa	Higher Algebra		Levant Books
Chakravorty and Ghosh	Advanced Higher Algebra		U N Dhar Pvt. Ltd
S. L. Loney	Coordinate Geometry		
Reference Books:			
Das and Mukherjee	Integral Calculus		U N Dhar Pvt. Ltd
Das and Mukherjee	Differential Calculus		U N Dhar Pvt. Ltd
E Kreyszig	Advanced Engineering Mathematics		Wiley

End Semester Examination Scheme. Maximum Marks-70. Time allotted-3hrs.

Group	**Unit**	**Objective Questions** (MCQ only with the correct answer)		**Subjective Questions**			
		No of question to be set	Total Marks	No of question to be set	To answer	Marks per question	Total Marks
A	**1 to 4**	**10**	**10**				
B	**1 to 4**			**5**	**3**	**5**	**70**

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C	**1 to 4**			**5**	**3**	**15**	

- Only multiple choice type question (MCQ) with one correct answer are to be set in the objective part.
- Specific instruction to the students to maintain the order in answering objective questions should be given on top of the question paper.

Examination Scheme for end semester examination:

Group	Chapter	Marks of each question	Question to be set	Question to be answered
A	**All**	**1**	**10**	**10**
B	**All**	**5**	**5**	**3**
C	**All**	**15**	**5**	**3**

Examination Scheme for Practical Sessional examination:

Practical Internal Sessional Continuous Evaluation

Internal Examination:

Five No of Experiments			

External Examination: Examiner-

Signed Lab Note Book(for five experiments)	**5*2=10**	
On Spot Experiment(one for each group consisting 5 students)	**10**	
Viva voce	**5**	

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Name of the Course: BCA **Subject:** PC Software Lab	
Course Code: BCA195	**Semester: 1st**
Duration: 48 Hours	**Maximum Marks: 100**
Teaching Scheme	**Examination Scheme**
Theory: 0	End Semester Exam: 60
Tutorial: 0	
Practical: 4 hrs./week	
Credit: 2	Practical Sessional internal continuous evaluation: 40
	Practical Sessional external examination: 60

Aim:	
Sl. No.	
1	To gain knowledge of basic computer components.
2	To gain knowledge of basic document processing softwares.
3.	To gain knowledge of basic presentation packages.

Objective:	
Sl. No.	
1	Understanding knowledge of basic computer components.
2	Using of basic document processing softwares.
3	Understanding of basic presentation packages.

Pre-Requisite:	
Sl. No.	
	None

Contents		**Hrs./week**	
Chapter	**Name of the Topic**	**Hours**	**Marks**
01	**Introduction to Software [Windows 7, Office 2010 [or, respective higher versions]]** Introduction to Windows 7 – Change Date and Time, Task Bar, Start Button, Creating a File and folder, Saving/Renaming, Moving Files, Renaming, Making a Copy, Copy Files onto a disk Shortcuts, Deleting, Trash Finding Lost or Misplaced Files, Folders and Printing of documents Basic Internet, Email and protection of PC Windows Settings	**10**	**15**
02	**Microsoft Word** Ribbon, Command Tabs, Hiding the Ribbon, Quick Access Toolbar, Office Menu Starting a new Document, Saving a document, Previewing a document, Printing a document Text, Formatting text, Text Boxes, Inserting Clip Art, Working with shapes, Line and Paragraph	**10**	**15**

	Spacing Selecting Text, Cut, Copy, Paste, Font, Size, Color, Bold, Italics, Underline Spelling and Grammar Check, Auto Correct, Auto Format Indenting Paragraphs, Paragraph Borders and Shading, Paragraph Alignment and Breaking Creating a table, Editing a table, Sizing a table, Formatting a table Inserting pictures, Setting picture position and text wrapping, Resizing and cropping Using clip art organizer, Creating with Word Art Columns, Headers and Footers, Applying Styles and themes, Mail Merge		
03	**Microsoft Excel:** Introduction to MS Excel 2010, Cells, Rows, and Columns, Sheet Tabs, Labeling and Naming Worksheets, Adding and Deleting Worksheets, Hiding/ Unhiding Worksheets, Hiding Columns and Rows, Saving Workbooks Printing Worksheets and Workbooks, Select Print Area , Print a Range of Pages, Printing Copying Cells, Rows, and Columns, Pasting Cells, Rows, and Columns, Inserting and Deleting Rows and Columns, Insert Cells Filling Cells with a Series of Data, Editing Cell Data, Find and Replace, Go To Locking Rows and Columns By Splitting Panes, Freezing Panes Change Font Styles and Sizes, Adding Borders and Colors to Cells, Changing Column Width Changing Row Height, Merge Cells, Applying Number Formats, Creating Custom Number Formats Align Cell Contents, Cell Styles, Conditional Formatting Header and Footer, Adding Images, Modifying Images, Rotating an image, Compressing a Picture Adding WordArt, Inserting AutoShapes, Adding Clip Art, Adding a Hyperlink, Embedding an Object Charts, Chart Tools, Modifying and Moving a Chart, Organizational Charts Formulas and Calculations, Mathematical operators, Creating a Formula Absolute, Relative and Mixed Cell References Excel Forms, Using Data Forms, Entering Data Using a Data Form Entering Data into a Table, Sorting Data into a Table, Filters Data Validation, Auditing, Trace Precedents and Dependents Protecting a Workbook, Importing and Exporting Data, Course Materials	**10**	**15**
04	**MS PowerPoint :** Open & close presentations, Create a presentation,Apply design themes, Specify slide transitions & timings, Set up a slide show, Preview, print & run presentations	**10**	**15**

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	Rearranging and deleting slides, Using slides from other presentations Formatting slides, Formatting text, Formatting paragraphs, Adding shapes, Modifying objects, Using text in objects WordArt, Pictures, Clip art, Tables, Charts, Diagrams Templates and themes, Slide masters, Transitions and timings, Speaker notes, Slide shows		
	Sub Total:	**40**	**60**
	Internal Assessment Examination & Preparation of Semester Examination		**40**
	Total:		**100**

Examination Scheme for Practical Sessional examination:			
Practical Internal Sessional Continuous Evaluation			
Internal Examination:			
Five No of Experiments			
External Examination: Examiner-			
Signed Lab Note Book(for five experiments)	**5*2=10**		
On Spot Experiment(one for each group consisting 5 students)	**10**		
Viva voce	**5**		