



RANI CHANNAMMA UNIVERSITY, BELAGAVI

WEL-COME

**TO THE COURSE STRUCTRE AND SYLLABUS OF UNDERGRADUATE
PROGRAMMES – BCA**

I Semester

w.e.f.

Academic Year 2017-18 and Onwards

Revised syllabus of BCA coursew.e.f. academic year 2017-18 and onwards

BCA revised syllabus (w.e.f. 2017-18 and onwards)							
Subject Code	Subject Title	Teaching Scheme Hrs/week		Examination			
		Theory	Practical	Exam. Duration (Hrs)	Marks		
					Theory/ Practical	IA	Total
BCA I Semester (w.e.f. 2017-18 and onwards)							
17BCAFNAT11(A)	Financial Accounting	4	--	3	80	20	100
17BCAMTMT11(B)	Mathematics-I	4	--	3	80	20	100
17BCAAENT12 17BCAHINT12 17BCAKANT12 17BCAMART12 17BCASANT12	MIL Add. English/ Hindi / Kannada / Marathi / Sanskrit	4	--	3	80	20	100
17BCACOFT13	Computer Fundamentals	4	--	3	80	20	100
17BCAPRCT14	Programming in C	4	--	3	80	20	100
17BCAINCT15	Indian Constitution	4	--	3	80	20	100
17BCACFLP16	Programming Lab. – Basic Computer Lab.	--	4	3	80	20	100
17BCACPRP17	Programming Lab.- C Programming	--	4	3	80	20	100

17BCAFNAT11(A): Financial Accounting

Teaching Hours: 4 Hrs/week

**Marks: Main Exam: 80
IA: 20**

UNIT I 10Hrs
Basic Accounting Concepts: Background of Accounting, Introduction, importance and scope, Accounts – Types and classification; basic terms– Capital, Income, Expenditure, Expenses, Assets, Liabilities and application to Problems., Accounting Equation, Double Entry System. Generally accepted accounting principles.

UNIT II 10Hrs
Journal and Ledger- Journal and recording of entries in journal with narration; Ledger –Posting from Journal to respective ledger accounts. Basic concepts of purchase book, sales book and cashbook. Trial Balance: Need and objectives; Application of Trial Balance; different types of errors escaped, trial Balance preparation.

UNIT III 10Hrs
Final Accounts: Final Accounts without adjustments. Understanding of final accounts of a Company. Important provisions of Companies Act, 2013 in respect of preparation of Final Accounts.

UNIT IV 10Hrs
Reconciliation and Depreciation: Bank Reconciliation Statement, Methods of Depreciation: Straight line Methods, Reducing Balance Method, Change in Depreciation Method. Preparation of simple bank reconciliation statement.

UNIT V 10Hrs
Computerised Accounting: Computers and Financial application, Accounting Software packages. An overview of computerized accounting system - Salient features and significance, Concept of grouping of accounts, Codification of accounts, maintaining the hierarchy of ledger, Generating Accounting Reports.

References:

1. Dr. R.K. Mittal & M.R. Bansal, Financial Accounting, VK Publications
2. Anil Chowdhry, Fundamentals of Accounting & Financial Analysis, Pearson Education
3. Maheshwari & Maheshwari, An Introduction to Accountancy, 11th Edition, Vikas Publishing House.
4. Jane Reimers, Financial accounting, Pearson Education
5. Rajni Preeti Hiro Sofat, Basic Accounting, PHI

Additional Reading:

6. Accounting for management, Bhattacharya & Deaden, Paperback Edition, Vikas 1986
7. Financial Accounting (Part I and Part II), R.L Gupta & V.K Gupta
8. Maheshwari S.N., Principles of Management Accounting, Sultan Chand & Sons,
9. Accounting Principal, Antony & Reece, Sixth Edition.

17BCA1711(B): Mathematics-I**Teaching Hours: 4 Hrs/week****Marks: Main Exam: 80****IA: 20****UNIT I**

10Hrs

Complex Numbers: Complex Numbers; Conjugate of a complex number; modulus of a complex Number; geometrical representation of complex number; De Moivre's theorem; nth roots of a complex number.

UNIT II

10Hrs

Sequence and Series: Arithmetic Progression (A.P.), Arithmetic Mean (A.M.), Geometric Progression (G.P.), general term of a G.P., sum of n terms of a G.P. Arithmetic and geometric series, infinite G.P. and its sum, geometric mean (G.M.). Relation between A.M. and G.M.

UNIT III

10Hrs

Binomial Theorem: Statement of the binomial theorem for positive integral indices, general and middle term in binomial expansion, simple applications.

Quadratic Equations: Solution of Quadratic Equations by factor method, complete square method, and Discriminant method, Relation of the roots.

UNIT IV

10Hrs

Introduction to Trigonometry: Trigonometry, The theorem of Pythagoras, Trigonometric ratios of acute angles, Evaluating trigonometric ratios, Solution of right-angled triangles, Angles of elevation and depression, Sine and cosine rules, Area of any triangle.

Vectors: Scalars and vectors, addition of two vectors, vector subtraction, scalar and vector products.

UNIT V

10Hrs

Co-ordinate Geometry: Distance formulae, section formulae, shifting of origin. Slope of a line and angle between two lines. Various forms of equations of a line: parallel to axes, point slope form, slope-intercept form, two-point form, intercepts form and normal form. General equation of a line. Equation of family of lines passing through the point of intersection of two lines. Distance of a point from a line.

References:

1. 11th & 12th NCERT Mathematics books.
2. B. S. Grewal, Elementary Engineering Mathematics, Khanna Publishers
3. S. L. Loney, M.A., The elements of coordinate geometry, Scholarly Publishing Office, University of Michigan Library
4. S. L. Loney, M.A., Plane Trigonometry, Scholarly Publishing Office, University of Michigan Library
5. <https://people.math.osu.edu/fowler.291/sequences-and-series.pdf>

Additional Reading:

6. H. S. Hall and S. R. Knight, Algebra for colleges and schools, McMillan Company
7. https://en.wikibooks.org/wiki/Elementary_School_Mathematics
8. https://en.wikibooks.org/wiki/Trigonometry#Table_of_Contents

GROUP -1 (LANGUAGES)
Detailed Syllabus for B.Sc. / B.Sc. Comp. Sc. / BCA / B.Sc. in CCJ
(With effect from 2016-17 onwards)
Semester I: Basic English
Teaching Hours: 5 per Week

I Text: Prose

- 1) Science and Religion - S. Radhakrisnan
- 2) Time to Ignite the Minds of the People - APJ Abdul Kalam
- 3) The Portrait of a Lady - Khushwant Singh
- 4) The Coffee House of Surat - Leo Tolstoy
- 5) Good Manners - J. C. Mill

Poetry

- 1) Delhi - R. Parthasarathy
- 2) The Purdah Nashin - Sarojini Naidu
- 3) Mirror - Sylvia Plath
- 4) No Second Troy - W. B. Yeats
- 5) To Blossoms - Robert Herrick

II Grammar and Communication Skills

- A) Use of Articles
- B) Use of Prepositions
- C) Transformation of Sentences
 - a) Remove too... to/use so... that (vice versa)
 - b) Remove if/use unless (vice versa)
 - c) Remove As soon as/use No sooner...than (vice versa)
 - d) Change the assertive sentence into exclamatory sentence without changing the meaning (vice versa)
 - e) Change the degrees
- D) Communicative Skills
 - a) Introducing: Self Introduction and Introducing the chief-guest /principal/principal/president/family member/friend
 - b) Report writing (Tour, Project, News, functions, seminars, accident earthquake, and flood)
 - c) Welcome address and Vote of Thanks
 - d) Dialogue writing

Pattern of Question Paper

(80 Marks paper of three hours and 20 Marks for I.A)

- | | |
|--|-----------|
| 1) Objective type questions
(5 from Prose and 5 from Poetry) | 10X1=10 |
| 2) Reference to Context (One from Prose out of two and one from Poetry out of two) | 2X5=10 |
| 3) Essay type question on Prose (one out of two) | 1X10=10 |
| 4) Essay type question on Poetry (one out of two) | 1X10=10 |
| 5) Short Notes (One from Prose and One from Poetry out of four) | 2X5=10 |
| 6) A) Use of Articles and Prepositions (2 for articles and 3 for prepositions) | 5X1=05 |
| B) Transformation of Sentences | 5X1=05 |
| C) Report Writing | 5X1=05 |
| 7) A) Introducing | 1X5=05 |
| B) Welcome and Vote of Thanks | 1X5=05 |
| C) Dialogue Writing | 1X5=05 |
| | 80 |

Additional English :

Detailed Syllabus for B. Sc. / B.Sc. Comp-Sc / BCA / B. Sc. in CCJ

(With effect from 2016-17 onwards)

Semester I: Additional English

Teaching Hours: 5 per Week

Text: Seven One-Act Plays (Ed), K.S. Ramamurthy: OUP

Only the following plays are to be studied.

1. The Seven Slaves - A. Ball
2. One Good Turn – A.E.M. Bayliss
3. Night Watches – Allan Monkhouse
4. The Unexpected – Ella Adkins
5. Sunday Costs Five Pesos – Josephina Niggli

Grammar and Composition

Modals (Making Sentences using Modals)

Sentence Linkers (Making Sentences using Linkers)

Use of words, phrases and idioms

Describing a situation (Marriage, Birthday, Local fair, temple festivals, national festivals, Funerals etc.)

Pattern of Question Paper

(80 Marks per paper of three hours and 20 Marks for I.A)

- | | |
|--|----------|
| 1) Objective type questions on the play | 10X1= 10 |
| 2) Reference to Context | 2X5=10 |
| 3) Essay type question on the plays (one out of two) | 1X10 =10 |
| 4) Essay type question on the plays (one out of two) | 1X10=10 |
| 5) Short Notes on the plays (two out of four) | 2X5=10 |
| 6) A) Modals Make sentences using given modals 5 out of 7 | 1X5 = 05 |
| B) Sentence Linkers | |
| Make sentences using given sentence linkers 5 out of 7 | 1X5 = 05 |
| 7) A) Use of words, phrases and idioms | |
| (3 Marks for Use of Words, 3 Marks for Phrases and 4 marks for Idioms and Phrases) | 10X1=10 |
| B) Describing a situation (about 200 words) | 1X10=10 |

80

Syllabus of B. Sc/BCA I Semester

Hindi Basic 2016-17 onwards

Teaching hours per week:	05 hours	Total Marks:	100 Marks
Examination:	03 hours	Theory:	80 Marks
		Internal Assessment:	20 Marks

Text Books:

1. अभिनव कथा भारती-सं. चक्रधर, सुमित्र प्रकाशन, इलाहाबाद
2. व्याकरण- (विकारी शब्द- संज्ञा, सर्वनाम, विशेषण, क्रिया)
3. अपठित रचना

Distribution of Marks

अभिनव कथा भारती	- 55 अंक
व्याकरण	- 15 अंक
अपठित रचना	- 10 अंक

A	Objective Type Questions (10 out of 14)	10 Marks
B	Annotations from Text Book (3out of 5)	15 Marks
C	Essay Type of Questions from Text Book (2 out of 4)	20 Marks
D	Short Notes from Text Book (2out of 4)	10 Marks
E	Grammar	15 Marks
F	अपठित रचना (Comprehension)	10 Marks
	Theory total	80 Marks
	Internal Assessment	20 Marks
	Total	100 Marks

Reference Books:

1. प्रेमचंद और जनवादी साहित्य की परम्परा - कुंवरपाल सिंह
2. हिंदी कहानी का इतिहास- गोपाल राय -
3. हिंदी कहानी एक अन्तर्यात्रा- रामदरश मिश्र
4. हिंदी कहानी का विकास- मधुरेश
5. साठोत्तरी हिंदी कहानी में पात्र और चरित्र चित्रण - डॉ. रामप्रसाद
6. हिंदी कहानी पाठ और प्रक्रिया- सुरेंद्र चौधरी
7. आज की कहानी- विजय मोहन सिंह
8. व्याकरण प्रदीप- राजदेव
9. आधुनिक हिंदी व्याकरण रचना- डॉ. वासुदेवनंदन प्रसाद
10. आधुनिक हिंदी व्याकरण का स्वरूप- डॉ. भारती खुबलकर
11. चक्रधर की साहित्यधारा- मार्कडेंय

ಸಾಹಿತ್ಯ ಸಿಂಚನ
ಬಿ.ಸಿ.ಎ., ಬಿ.ಬಿ.ಎ., ಬಿ.ಎಸ್ಸಿ. (ಕಂಪ್ಯೂಟರ್ ಸೈನ್ಸ್) ಸಿ.ಸಿ.ಜೆ (ಬಿ.ಎಸ್ಸಿ) ತರಗತಿಗಳಿಗೆ
ಮೊದಲ ಸೆಮಿಸ್ಟರ್
ಕನ್ನಡ ಆವಶ್ಯಕ ಪತ್ರಿಕೆ
೨೦೧೬-೧೭ ರಿಂದ

(ಒಟ್ಟು ಪಾಠದ ಅವಧಿ ೮೦ ಗಂಟೆಗಳು. ವಾರಕ್ಕೆ ೦೫ ಗಂಟೆಗಳ ಪಾಠ, ಒಟ್ಟು ಅಂಕಗಳು ೧೦೦. ಆಂತರಿಕ ಗುಣಾಂಕಕ್ಕೆ ೨೦ ಅಂಕಗಳು (ಹಾಜರಾತಿಗೆ ೦೪, ಮೊದಲ ಕಿರು ಪರೀಕ್ಷೆಗೆ ೦೪, ಎರಡನೆಯ ಕಿರು ಪರೀಕ್ಷೆಗೆ ೧೦, ನಿಯೋಜಿತ ಕಾರ್ಯಕ್ಕೆ ೦೨ ಅಂಕಗಳು) ಹಾಗೂ ಥಿಯರಿ ಪರೀಕ್ಷೆಗೆ ೮೦ ಅಂಕಗಳು.)

ಪರಿವಿಡಿ

೧. ವಚನಗಳು	- ಶರಣರು
೨. ಕೀರ್ತನೆಗಳು	- ದಾಸರು
೩. ಗುರುವಿನ ಮಹತ್ವ	- ಸರ್ವಜ್ಞ
೪. ತತ್ವಪದಗಳು	- ಶಿಶುನಾಳ ಶರೀಫ
೫. ಮಹಾಮಾರ್ಗದ ಪಥಿಕ	- ಚೆನ್ನವೀರ ಕಣವಿ
೬. ಮಲಗಿಸೆನ್ನನು ತಾಯೆ	- ಈಶ್ವರ ಸಣಕಲ್ಲ
೭. ಜಾಜಿಮಲ್ಲಿಗೆ	- ಸತ್ಯಾನಂದ ಪಾತ್ರೋಟ
೮. ಅಗ್ನಿಭೂತಿ-ವಾಯುಭೂತಿಯ ಕಥೆ	- ಶಿವಕೋಟಾಚಾರ್ಯ
೯. ವಿಚಾರ ಕ್ರಾಂತಿಗೆ ಆಹ್ವಾನ	- ಕುವೆಂಪು
೧೦. ಅವಾಂತರದ ಸೀನಪ್ಪ	- ಪೂರ್ಣಚಂದ್ರ ತೇಜಸ್ವಿ
೧೧. ವಾಟರ್ ಮಾರ್ಸರ್ ವಾಟರ್	- ಬಸವರಾಜ ಡೋಣೂರ
೧೨. ಕೃತಕ ಜೀವಿಗಳ ಆಗಮನ	- ನಾಗೇಶ ಹೆಗಡೆ
೧೩. ನಗು	- ಎಚ್ಚೆಸ್ಕೆ
೧೪. ತಾಜಮಹಲ್	- ಪ್ರಹ್ಲಾದ ಅಗಸನಕಟ್ಟೆ

Syllabus prescribed for B.Sc is applicable to B.C.A and B.Sc C.S.

**B.Sc
Semester I
Basic Marathi**

Course: Literary Form: Short Story

Text: Nagamandal: Aruna Dhere

(Excluded Stories: 1. Khel: M M Karnik. 2. Bhujang: M M Karnik.
3. Sarp: G A Kulakarni)

Suresh Agency, Pune

**B. Com / BBA / BCA : First Semester Basic Samskrit
Examination Marks One paper carrying 100 Marks (80+20) of 3
hours duration
2016-17 Onwards**

Text :

Sanskrit Vangmaya Manjusha

Bharat Book Depot & Prakashan, Shankar

Plaza, P. B. Road, Dharwad.

a. Sanskrit Vangmaya Manjusha	70 Marks
b. Grammar (use of cases) (Neuter Gender only)	10 Marks
a) Internal Assessment	20 Marks
i. Internal Test – 14	
ii. Assignment, Class record, Skill development – 06	
Total	100 Marks

DIVISION OF MARKS FOR THE BASIC

PAPER:

B. COM / BBA / BCA I SEMESTER

(Pattern of the Question Paper)

I Passage for Translation and Explanation from the Text (with internal choice)	10 Marks
II Objective type questions in Sanskrit with three option in bracket Below each question (10 out of 12)	10 Marks
III Sentences for annotation from the text (any 4 out of 7)	20Marks
IV Short notes from th text (any 2 out of 4)	10 Marks
V Essay type questions from the Vanijya Ithihas in Sanskrit Literature (Any 2 out of 4)	20 Marks
VI Grammar : Neuter Gender noun Pronoun case forms	10 Marks
Total	80 Marks

17BCAAENT12/17BCAHINT12/17BCAKANT12/17BCAMART12/17BCASANT12: MIL Teaching Hours: 4 Hrs/week	Marks: Main Exam: 80 IA: 20
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17BCA1713: Computer Fundamentals Teaching Hours: 4 Hrs/week	Marks: Main Exam: 80 IA: 20
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UNIT I 10Hrs

Introduction: Computer, data processing, characteristic features of computers, computer evolution to present form, computer generation.

Basic computer organization: Basic operations performed by computers, basic organization of computer system, input units and its functions, output units and its functions, storage units and its functions, types of storage.

UNIT II 12Hrs

Number systems: non-positional number system, positional number system, decimal, binary, octal, and hexadecimal number systems. Conversion from decimal to binary and vice-versa.

Computer Codes: Computer data, computer codes: representation of data in binary, commonly used computer codes, collating sequence.

Computer arithmetic: Basic arithmetic operations using binary numbers.

UNIT III 12Hrs

Processor and memory: Internal structure of processor, memory structure, types of processors, main memory organization, random access memory, read only memory, cache memory.

Secondary storage: secondary storage devices and their needs, commonly used secondary storage devices, sequential and direct access storage devices, basic principles of commonly used secondary storage devices (magnetic disk, optical disk, flash drives, memory card, disk array).

IO devices: commonly used input output(IO) devices.

UNIT IV 08Hrs

Software: Software and its relationship with hardware, types of softwares, relationship among hardware, system software, application software and users of computer systems, steps involved in software development, firmware, middleware.

Application software case study: MS-Word: editing and formatting documents.

Overview of operating system: Definition, functions of operating system, concept of multiprogramming, multitasking, multithreading, multiprocessing, time-sharing, real time, single-user & multi-user operating system.

UNIT V 08Hrs

Windows OS- Basics of Windows, basic components of windows, icons, taskbar, activating windows, using desktop, title bar, running applications, exploring computer, managing files and folders, copying and moving files and folders. Control panel – display properties, adding and removing software and hardware.

Linux OS- Basics of Linux OS, Introduction to bash shell, Basic Commands (ls,cd,tail,cat,mkdir), commands to work with file(mv,cp,rm) , text editor (vim), Stream text editor (grep, sed, and awk), STDERR,STDOUT,STDIN, Compression Tar, gzip and bzip2, easily accessible tools in linux.

References:

1. Computer Fundamentals, P. K. Sinha and Priti Sinha, Sixth Edition, BPB publications.
2. ReemaThareja, Fundamentals of Computers, Oxford Higher Education, Oxford University Press.
3. S. K. Basandra, Computers Today ,Galgotia Publications.
4. E. Balaguruswamy, Fundamentals of Computers, McGraw hill

Additional Reading:

5. Peter Norton, Introduction to Computers , 6th Edition, Tata McGraw Hill
6. Xavier C. , Introduction to Computers and Basic Programming, New age International,
7. Rajaraman, V., Adabala, Neeharika, Fundamentals of Computers, PHI
8. Computer Concepts and Applications : <http://uwf.edu/clemley/cgs1570w/notes>,
https://www.tutorialspoint.com/computer_fundamentals/index.htm
9. Computers in education: <http://www.mhhe.com/peternorton>

17BCA1714: Programming in C

Teaching Hours: 4 Hrs/week

Marks: Main Exam: 80

IA: 20

UNIT I

10Hrs

Programming Languages and its Classification, Compiler, Interpreter, Linker, Loader.

Problem Solving: Problem Identification, Analysis, flowcharts, Pseudo codes and algorithms, Program Coding, Program Testing and Execution. Examples of flow charts and algorithms- Largest of three numbers, reversing the digits of an integer, base conversion, GCD of two integers, generating prime numbers, sine function computation, computing nth Fibonacci numbers.

UNIT II

10Hrs

Overview of C: C character set, identifiers and keywords, Data types, Constants and Variables, Assignment statement, Symbolic constant, Structure of a C Program, printf(), scanf() Functions, Operators & Expression: Arithmetic, relational, logical, bitwise, unary, assignment, shorthand assignment operators, conditional operators and increment and decrement operators, Arithmetic

expressions, evaluation of arithmetic expression, type casting and conversion, operator hierarchy & associativity.

UNIT III

10Hrs

Decision making & branching: Decision making with IF statement, IF-ELSE statement, Nested IF statement, ELSE-IF ladder, switch statement, goto statement. Decision making & looping: For, while, and do-while loop, jumps in loops - break, continue statement, Nested loops.

Functions: Standard Mathematical functions, Input/output: Unformatted & formatted I/O function in C. User defined functions: definition, prototype, Local and global variables, passing parameters, recursion.

UNIT IV

10Hrs

Arrays, strings and pointers: Definition, types, initialization, processing an array, passing arrays to functions, Array of Strings. String constant and variables, Declaration and initialization of string, Input/output of string data, Storage classes in C: auto, extern, register and static storage class, their scope, storage, & lifetime.

String Handling: String Library Functions: strlen, strcat, strcmp, strcpy, strrev.

UNIT V

10Hrs

Structure & Union: Definition of Structure, Declaring Structure, Accessing Structure Elements, Array of Structure, Nesting of Structure. Definition of Union, declaring and using Union. Difference between Structure & Union.

Error Handling during I/O Operations, Command Line Arguments, Documentation, debugging, C Processors, Macros.

References:

1. Gill Nasib Singh, Computing Fundamentals and Programming in C, Khanna Books Publishing Co., New Delhi.
2. Balagurusamy E., Computing Fundamentals and C Programming, Tata McGraw Hill.
3. Stephen G. Kochan, Programming in Ansi C, Sams Publishing
4. Kenneth. A., C problem solving and programming, Prentice Hall.
5. R.G. Dromey, How to Solve it by Computer, Pearson Education

Additional reading

6. Anil V. Chouduri, The Art of Programming through Flowchart and Algorithms, Laxmi Pub.
7. Gottfried, Byron S., Programming with C, Tata McGraw Hill.
8. E. Balaguruswamy, Programming in ANSI C, McGrawhill.
9. Ashok N. Kamthane, Programming in C, Pearson Education.
10. www.cprogramming.com

17BCACPRP17: Programming Lab- Basic Computer Lab.

Practical Hours: 4 Hrs/week

Marks: Main exam: 80

IA: 20

Part-I

Students shall practice working in Linux Environment-Open Source OS. Student shall understand basic shell environment.

Following shall be practiced

- OS boot process.
- Familiarity with bash/similar shell for executing basic shell commands such as ls, cd, mv, man, mkdir, rm, locate, touch, cat, chmod, who, tty, shutdown, pipe, etc.
- Creating files and directives, changing file permissions, path names
- Using vi editor
- GUI commands
- Basic commands through shell script
 - Echo command
 - Creating new variables and echoing
 - Using if statement scripts runs a command to count the number of lines in the filename provided
 - Handling shell variables

Part-II

Students shall gain familiarity of Windows 10/Windows 8 OS- Basics of Windows, basic components of windows, icons, taskbar, activating windows, using desktop, title bar, running applications, exploring computer, managing files and folders, copying and moving files and folders. Control panel features, adding and removing software and hardware.

Part-III

Students shall know about the various hardware components of a typical desktop computer/laptop. Identify motherboard, processor, network card, data bus, i/o devices, hard drive, hard disk, flash drive, various ports and other parts of computer.

Part-IV

Students shall gain familiarity with word processing software such as MS Word/Open Office. Understand various editing and formatting features, mail-merge option, encrypting the document, and inserting clipart/shapes,/hyperlink/word art.

Lab Record

Students shall write

1. Features of Linux OS, description of the basic shell commands
2. Features of Windows OS
3. Description about typical hardware component of computer system

4. A minimum of five MS-word document assignments covering various features of MS-Word.

17BCACPRP17: Programming Lab- C programming	
Practical Hours: 4 Hrs/week	Marks: Main exam: 80
	IA: 20

Students are encouraged to use Linux-Open Source OS for executing c –programs using gcc/similar compiler available with Linux.

Students shall gain familiarity with working in Linux environment with the help of course teacher in Lab.

Following shall be practiced

- Using vi editor for writing c programs
- Familiarity with bash/similar shell for executing basic shell commands such as ls, cd, mv, man, mkdir, rm, locate, touch, cat, etc.

URL for reference: <http://www.ee.surrey.ac.uk/Teaching/Unix/> ,
<https://www.tutorialspoint.com/unix/unix-vi-editor.htm> ,
https://www.tutorialspoint.com/compile_c_online.php

Student shall gain hands-on experience of drawing flow chart, writing algorithm, and writing c programs and executing the c program. Following assignments shall be implemented in C.

1. Write a program to enter length and breadth of a rectangle and find its perimeter and area.
2. Write a program to enter P, T, R and calculate Simple Interest.
3. Write a program to find maximum between three numbers.
4. Write a program to check whether year is leap year or not using conditional/ternary operator.
5. Write a program to function as a basic calculator; it should ask the user to input what type of arithmetic operation he would like, and then ask for the numbers on which the operation should be performed. The calculator should then give the output of the operation. Use switch. Error message should be reported, if any attempt is made to divide by zero.
6. Write a program that takes in three arguments, a start temperature (in Celsius), an end temperature (in Celsius) and a step size. Print out a table that goes from the start temperature to the end temperature, in steps of the step size; Celsius to Fahrenheit.
7. Write a program to sort array elements in ascending order.
8. Write a program to subtract/add/multiply two matrices.
9. Write a program to find HCF (GCD) of two numbers.
10. Write a C Program to check the given number is Armstrong number or not? Armstrong number is a number that is the sum of its own digits each raised to the power of the number of digits.
Example: $153 = 1^3 + 5^3 + 3^3$
11. Write a program to check whether an alphabet is vowel or consonant using switch case.
12. Write a program to display all possible permutations of a given input string--if the string contains duplicate characters, you may have multiple repeated results. Input should be of the form permute *string* and output should be a word per line.

Here is a sample for the input *cat*

```
cat
cta
act
atc
tac
tca
```


13. Write a function that accepts a number, n, and prints all prime numbers between 1 to n.
14. Write an iterative function calculate factorial of a given integer.
15. Write a function that accepts array of integers to find maximum and minimum element in an array.
16. Write a program to input marks of five subjects Physics, Chemistry, Biology, Mathematics and Computer. Calculate percentage and grade according to following. Use structure to create array of students and compute percentage and grade by passing structure to function.
 Percentage \geq 90% : Grade A
 Percentage \geq 80% : Grade B
 Percentage \geq 70% : Grade C
 Percentage \geq 60% : Grade D
 Percentage \geq 40% : Grade E
 Percentage $<$ 40% : Grade F
17. Write a C program to add two complex numbers by passing structure to a function. Consider the following structure definition for complex number.

```
typedef struct complex
{
float real;
float imag;
} complex;
```
18. Write a C program to illustrate difference between structure and union by defining emp_Name, salary, job as members and displaying the size of the defined structure and union. (ie. In terms of memory allocation)
19. Write a program that accepts a base ten (non-fractional) number at the command line and outputs the binary representation of that number.
20. Write a C program to concatenate two strings without using library function
21. Write a C program to compare two strings without using library function
22. Write a C program to illustrate string library functions (copy, concat, uppercase to lower case and vice-versa, length of string, sort set of strings(use strcmp)).

Note:

- 1) Students shall write flow charts for ten programs, among the given set of assignments, identified by courser teacher, covering all the symbols of the flow charts.
- 2) Students shall write algorithms for ten programs, among the given set of assignments, identified by courser teacher.

**Indian Constitution
(Compulsory Paper) 2018-19 Onwords**

Name of the Subject: Indian Constitution

Contact Hours: 52

Marks Main Exam: 80

Subject Code :

Contact Hours: 4

Internal Assessments: 20

Unit-I History of Indian Constitution 12 Hours

Constitutional History, Preamble salient features, citizenship, Method of Amendment and Recent Amendments

Unit-II Rights and Duties 10 Hours

Fundamental Rights and Directive Principles of State Policy. Fundamental Duties. Difference between Fundamental Rights and Directive Principles of State Policy

Unit-III Union Government 10 Hours

- a) President- powers and functions. Vice president powers and functions, Prime Minister and council of ministers
- b) Parliament- Lok Sabha, Rajya Sabha- composition powers and functions.
- c) Judiciary (Supreme Court) composition powers and functions Judicial Activism

Unit-IV State Government 10 Hours

- a) Governor: powers and functions
- b) Chief minister:
- c) State Legislative Assembly and Legislative Council- composition powers and functions.
- d) High Court : composition powers and functions

Unit-V Recent Trends in Indian Constitution 8 Hours

- a) Basic structure of Indian Constitution.
- b) Electoral Reforms
- c) Anti Defection Law
- c) Panchayati Raj system in India.

Books of Reference :

1. M.V.Pylee, An Introduction to the Constitution of India, New Delhi, Vikas, 2005.
2. SubhashC.Kashyap, Our Constitution: An Introduction to India's Constitution and constitutional Law, New Delhi, National Book Trust, 2000.
3. Durga Das Basu, Introduction to the Constitution of India, New Delhi, Prentice Hall of India, 2001.
4. D.C.Gupta, Indian Government and Politics, VIII Edition, New Delhi, Vikas, 1994.
5. J.C.Johari, Indian Government and Politics, Delhi, Sterling Publishers, 2004. 90
6. V.D.Mahajan, Constitutional Development and National Movement in India, New Delhi, S. Chand and Co., latest edition.
7. Constituent Assembly Debates, New Delhi, Lok Sabha Secretariat, 1989.
8. Granville Austin, Working of a Democratic Constitution: The Indian Experience, New Delhi, Oxford University Press, 1999.
9. A.P.Avasthi, Indian Government and Politics, Agra, Naveen Agarwal, 2004
10. S.A.Palekar, Indian Constitution, New Delhi, Serials Publications, 2003.
11. Brij Kishore Sharma, Introduction to the Constitution of India (Second Edition), New Delhi, Prentice-Hall of India, 2004.
12. H.M.Rajashekhar, Understanding the Indian Constitution, Mysore, Prabodha, 2005. 13. J.N.Pandey, Constitutional Law of India, Allahabad. Central Law Agency
13. Indian Policy- M Laxmikanth, McGRAW hill education WE Series 4th Edition

Scheme of Instruction and Examination

Sem	Title of the paper	Theory Hours	Theory Marks	I A Marks	Exam Hrs	Total Marks
I	Indian Constitution	4 hrs	80	20	1.5	100

Note: The Final Examination pattern: Multiple Choice Questions (MCQ). Each unit shall carry equal weightage during the preparation of the question paper.