



# હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી

NAAC A (3.02) State University

પો.બો.નં.—૨૧, યુનિવર્સિટી રોડ, પાટણ (ઉ.ગુ.) ૩૮૪૨૬૫

ફોન: (૦૨૭૬૬) ૨૩૭૦૦૦

ફેક્સ : (૦૨૭૬૬) ૨૩૧૮૧૭

Email : [regi@ngu.ac.in](mailto:regi@ngu.ac.in)

Website : [www.ngu.ac.in](http://www.ngu.ac.in)

## પરિપત્ર ક્રમાંક — ૧૭૩/૨૦૧૯

**વિષય :** મેનેજમેન્ટ સ્ટડીઝ વિદ્યાશાખા અંતર્ગત BCA Sem 1&2 , M.Sc. (CA & IT) Sem 1 & 2 અને MCA (Int.) ના અભ્યાસક્રમોના પ્રશ્નપત્રના માળખા અંગે...

આ યુનિવર્સિટીના સંલગ્ન મેનેજમેન્ટ સ્ટડીઝ વિદ્યાશાખાની તમામ કોલેજોના આચાર્યશ્રીઓને જણાવવાનું કે, મેનેજમેન્ટ સ્ટડીઝ વિદ્યાશાખા અંતર્ગત BCA Sem 1&2 , M.Sc. (CA & IT) Sem 1 & 2 અને MCA (Int.) ના સામેલ પરિશિષ્ટ પ્રમાણેનું મેનેજમેન્ટ વિદ્યાશાખાના ડીનશ્રીએ રજૂ કરેલ પ્રશ્નપત્રનું માળખું જૂન-૨૦૧૯ થી અમલમાં આવે તે રીતે એકેડેમિક કાઉન્સિલવતી માન. કુલપતિશ્રીએ મંજૂર કરેલ છે. જેનો અમલ કરવા સારૂ સંબંધિતોને આ સાથે મોકલવામાં આવે છે.

આ બાબતની સંબંધિત અધ્યાપકો તથા વિદ્યાર્થીઓને આપના સ્તરેથી જાણ થવા વિનંતી છે.

સહી/—  
અધ્યક્ષ

બિડાણ : ઉપર મુજબ

નં.—એ કે / અ× સ / ૪૩૨૧ / ૨૦૧૯

તારીખ: ૨૩ / ૦૮ / ૨૦૧૯

પ્રતિ,

૧. સંલગ્ન BCA, M.Sc.(CA & IT) અને MCA કોલેજોના આચાર્યશ્રીઓ
૨. ડૉ. નિશિથકુમાર એચ. ભટ્ટ (ડીનશ્રી મેનેજમેન્ટવિદ્યાશાખા), ડીપાર્ટમેન્ટ ઓફ એમ.બી.એ., હેમ. ઉ.ગુ. યુનિવર્સિટી, પાટણ.
૩. મેનેજમેન્ટ સ્ટડીઝ વિદ્યાશાખા હેઠળના વિષયોની અભ્યાસ સમિતિઓના ચેરમેનશ્રીઓ
૪. પરીક્ષા નિયામકશ્રી, હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ. (બે નકલ)
૫. ગ્રંથપાલશ્રી, હેમ.ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ. (વિદ્યાર્થીઓના ઉપયોગ સારૂ રેકર્ડ ફાઈલ માટે )
૬. સીસ્ટમ એનાલીસ્ટ, કોમ્પ્યુટર(રીઝલ્ટ) સેન્ટર, હેમ.ઉ.ગુ. યુનિવર્સિટી, પાટણ તરફ પરિણામ માટે તથા વેબસાઈટ પર મૂકવા સારૂ.
૭. મુખ્ય હિસાબી અધિકારીશ્રી (મહેકમ), હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ તરફ—પરિપત્રની ફાઈલ અર્થે
૮. સિલેક્ટ ફાઈલે— (૨ નકલ)



# હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી

NAAC A (3.02) State University

પો.બો.નં.-૨૧, યુનિવર્સિટી રોડ, પાટણ (ઉ.ગુ.) ૩૮૪૨૬૫

ફોન:(૦૨૭૬૬) ૨૨૨૭૪૫, ૨૩૦૫૨૯, ૨૩૦૭૪૩, ૨૩૩૬૪૮

ફેક્સ : (૦૨૭૬૬) ૨૩૧૯૧૭

Email : [regi@ngu.ac.in](mailto:regi@ngu.ac.in)

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## પરિપત્ર ક્રમાંક — ૧૨૦ / ૨૦૧૮

વિષય:- B.C.A. Semester – 1 & 2 ના નવા અભ્યાસક્રમ અંગે..

આ યુનિવર્સિટી સંલગ્ન બી.સી.એ. કોલેજોના આચાર્યશ્રીઓને જણાવવાનું કે, B.C.A. Semester-1 & 2નો સામેલ પરિશિષ્ટ પ્રમાણેનો નવો અભ્યાસક્રમ એકેડેમિક કાઉન્સિલએ તેની તારીખ: ૦૫/૦૬/૨૦૧૮ની સભાના ઠરાવ ક્રમાંક:-૩૭ થી શૈક્ષણિક વર્ષ : ૨૦૧૮-૨૦ થી ક્રમશઃ અમલમાં આવે તે રીતે મંજૂર કરેલ છે. જેનો અમલ થવા સારું સંબંધિતોને આ સાથે મોકલવામાં આવે છે.

આ બાબતની સંબંધિત અધ્યાપકો તથા વિદ્યાર્થીઓને આપના સ્તરેથી જાણ કરવા વિનંતી છે.

નોંધ :- (૧) વિદ્યાર્થીઓની જરૂરીયાત માટે પરિપત્રની એક નકલ કોલેજના ગ્રંથાલયમાં મૂકવાની રહેશે.

(૨) આ અભ્યાસક્રમ / સ્કીમ યુનિવર્સિટીની વેબ સાઈટ [www.ngu.ac.in](http://www.ngu.ac.in) પર પણ ઉપલબ્ધ કરાવવામાં આવનાર છે.

સહી/-

બિડાણ : ઉપર મુજબ

કુલસચિવવતી

નં.-એ કે / અ× સ / ૩૬૫૮ / ૨૦૧૮

તારીખ: ૦૭/૦૮/૨૦૧૮

પ્રતિ,

૧. સંલગ્ન બી.સી.એ. કોલેજોના આચાર્યશ્રીઓ
૨. ડૉ.રાજેશ એમ.મહેતા (ચેરમેનશ્રી-કોમ્પ્યુટર સાયંસ) આઈ.એન.એસ.બી., બી.સી.એ.કોલેજ, એસ.ટી.સ્ટેન્ડ પાસે, મુ. ઈડર, જિ.સાબરકાંઠા -૩૮૩ ૪૩૦
૩. પરીક્ષા નિયામકશ્રી, હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ. (પાંચ નકલ)
૪. ગ્રંથપાલશ્રી, હેમ.ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ. (વિદ્યાર્થીઓના ઉપયોગ સારું રેકર્ડ ફાઈલ માટે )
૫. સિસ્ટમ એનાલીસ્ટશ્રી, કોમ્પ્યુટર (રીઝલ્ટ) સેન્ટર, હેમ.ઉ.ગુ.યુનિવર્સિટી, પાટણ. તરફ પરિણામ માટે તથા વેબસાઈટ પર મૂકવા સારું.
૬. માન.કુલપતિશ્રી/ કુલસચિવશ્રીનું કાર્યાલય, હેમ.ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ.
૭. પ્રવેશ પ્રશાખા (એકેડેમિક), હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ.
૮. મુખ્ય હિસાબી અધિકારીશ્રી (મહેકમ), હેમચંદ્રાચાર્ય ઉત્તર ગુજરાત યુનિવર્સિટી, પાટણ તરફ → પરિપત્રની ફાઈલ અર્થે
૯. સિલેક્ટ ફાઈલે-(૨ નકલ)

## **BCA –SEMESTER-1**

### **BCA-101 : Fundamentals of Programming Language 'C'**

*Question Paper Scheme: (Total Marks:70)*

#### **Q.1 - Unit-I**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

#### **Q.2 - Unit-II**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

#### **Q.3 - Unit-III**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

#### **Q.4 - Unit-IV**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Note: All Objective/ Short Questions are compulsory, no option will be given.**

**BCA-102 : Database Management System**

*Question Paper Scheme: (Total Marks:70)*

**Q.1 - Unit-I**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.2 - Unit-II**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.3 - Unit-III**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.4 - Unit-IV**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

Note: All Objective/ Short Questions are compulsory, no option will be given.

**BCA-103 : Computer Organization**

*Question Paper Scheme: (Total Marks:70)*

**Q.1 - Unit-I**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.2 - Unit-II**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.3 - Unit-III**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.4 - Unit-IV**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

Note: All Objective/ Short Questions are compulsory, no option will be given.

**BCA-104: Communication Skills**

*Question Paper Scheme: (Total Marks:70)*

**Q.1 - Unit-I**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.2 - Unit-II**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.3 - Unit-III**

A) Objective / Short Question (05 Marks)

B) Descriptive/ Long questions. (12 Marks)

**Q.4 - Unit-IV**

A) Objective / Short Question (06 Marks)

B) Descriptive/ Long questions. (12 Marks)

Note: All Objective/ Short Questions are compulsory, no option will be given.

**Bachelor Of Computer Application (W.E.F. JUNE : 2018)**

Update on : MAY-2018

**SEM : I**

PAPER NO	NAME OF SUBJECT	Evaluation Weightage			Credit
		Internal	External	Total	
BCA -101	Fundamentals of Programming Language 'C'	30	70	100	4
BCA -102	Database Management System	30	70	100	4
BCA -103	Computer Organization	30	70	100	4
BCA -104	Communication Skills	30	70	100	4
	<b>Practicals</b>				
BCA -105	Fundamentals of Programming Language 'C'	30	70	100	4
BCA -106	Database Management System and PC- Packages	30	70	100	4
	<b>Total :</b>	180	420	600	24

**SEM : II**

PAPER NO	NAME OF SUBJECT	Evaluation Weightage			Credit
		Internal	External	Total	
BCA -201	Advanced Programming Language 'C'	30	70	100	4
BCA -202	Internet & Web Designing	30	70	100	4
BCA -203	Discrete Mathematics	30	70	100	4
BCA -204	System Analysis and Design	30	70	100	4
	<b>Practicals</b>				
BCA -205	Advanced Programming Language 'C'	30	70	100	4
BCA -206	Internet & Web Designing	30	70	100	4
	<b>Total :</b>	180	420	600	24

**B.C.A. Semester – I**  
**BCA-101: Fundamentals of Programming Language ‘C’**

Teaching Scheme (Per Week)		Teaching Scheme (Per Semester)		Examination Scheme					
				Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total Hours	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
4	--	40	4	30	--	70	--	100	--

**Unit - I**

**[18 Marks]**

**Introduction to Programming:**

Concepts of Algorithm and Flowcharts, problem solving examples using algorithm and flowchart, Types of Programming languages, Characteristics of higher level language, Compiler and Interpreter

**Overview of C:**

Introduction, Importance of C, Sample C programs, Basic structure of C programs, Programming style, executing of C program.

**Constants, Variables and data Types:**

Introduction, Character Set, C tokens, Keywords and Identifiers, Constants, Variables, Data types, Declaration of Variables, Defining symbolic constants.

**Unit - II**

**[17 Marks]**

**Operators and Expression :**

Introduction, Arithmetic of Operators, Relational Operators, Logical Operators, Assignment Operators, Increment and Decrement Operators, Conditional Operators, Bit-wise Operators, Special Operators, Arithmetic Expressions, Evaluation of expressions, Precedence of arithmetic operators, Type conversions in expressions, Operator precedence and associativity, Mathematical functions.

**Managing Input and Output Operators :**

Introduction, reading a character, writing a character, formatted input, formatted output.

**Unit - III**

**[18 Marks]**

**Decision making branching:**

Introduction, Decision making with IF statement, Simple IF statement, the IF ELSE statement, Nesting of IF ... ELSE statements, The ELSE IF ladder, The switch statement, the turnery (? :) Operator, the GOTO statement.

**Decision Making Looping:**

Introduction, the WHILE statement, the DO statement, The FOR statement, Jumps in loops Break and continue.

**Unit - IV**

**[17 Marks]**

**Array :**

Introduction, One-dimensional, arrays, Two-dimensional arrays, Initialization of two-dimensional arrays, Concept of Multidimensional arrays



**Handling of Character strings :**

Introduction, Declaring and initializing string variables, Reading strings from terminal, Writing strings to screen, Arithmetic operations on characters, Putting string together, String Operations: String Copy, String Compare, String Concatenation And String Length, String Handling functions, Table of strings.

**Text Book:**

1. **Programming in ANSI C**, Balagurusamy, Tata McGraw-Hill

**Reference Books:**

1. Programming in C, by Pradip Dey & Manas Ghosh, Publisher – Oxford
2. The Complete Reference, Herbert schildt Fourth Edition
3. Let Us C , Yashwant Kanetkar, BPB Publications
4. Programming in C, by Reena thareja Publisher – Oxford

**Question Paper Scheme:****University Examination Duration: 3 Hours.**

Q.1 - Unit-I	
Descriptive/ Long questions.	(12 Marks)
Q.2 - Unit-II	
Descriptive/ Long questions.	(12 Marks)
Q.3 - Unit-III	
Descriptive/ Long questions.	(12 Marks)
Q.4 - Unit-IV	
Descriptive/ Long questions.	(12 Marks)
Q.5 - Programs	
A. Unit I, II, III & IV-Objective / Short	(12 Marks)
Question B. Unit I, II, III & IV - Programs	(10 Marks)

Note: Option should be given in all questions.

**B.C.A. Semester – I**  
**BCA-102: Database Management System**

Teaching Scheme (Per Week)		Teaching Scheme (Per Semester)		Examination Scheme					
				Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total Hours	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
4	--	40	4	30	--	70	--	100	--

**Unit - I**

**[18 Marks]**

**Database Concepts:**

Database and DBMS, Comparison between traditional file V/s DBMS, Characteristics of data in database, Components of database system environment, Functions of DBMS, Advantages and disadvantages of the DBMS, DBMS users, Database administrator, Role of DBA

**Unit – II**

**[17 Marks]**

**Database Design and Architecture**

Essentials of Database Design, Three level Architecture of Database- external, conceptual and internal, Data Models concepts: Hierarchical, Network and Relational, Operators, relations, domains and attributes, keys, traditional set operations, special relational operations.

**Unit - III**

**[18 Marks]**

**The E/R model**

Entity, E-R Diagram, Attributes, Relationship & Types, Development stages of E-R diagram & Examples

**Normalization**

Normalization Process, 1<sup>st</sup> NF, 2<sup>nd</sup> NF, 3<sup>rd</sup> NF, demoralization.

**Unit – IV**

**[17 Marks]**

**MS-Access**

Introduction of Database,  
 Data type - Text, Number, Auto number, Currency, Boolean, Date/Time, Memo  
 Object – Table, Query, Forms, Reports  
 Controls use in form and report

**Books:**

1. Database Management System A C Shah & A R Patel, MacMillan Publication
2. Introduction to Database System C. J. Date (7<sup>th</sup> edition) Low Price Edition
3. Database system concepts Henry F. Korth (3<sup>rd</sup> edition) TMH Publications

## **Question Paper Scheme:**

**University Examination Duration: 3 Hours.**

- |  |            |
|--|------------|
| Q.1 - Unit-I<br>Descriptive/ Long questions.   | (12 Marks) |
| Q.2 - Unit-II<br>Descriptive/ Long questions.  | (12 Marks) |
| Q.3 - Unit-III<br>Descriptive/ Long questions. | (12 Marks) |
| Q.4 - Unit-IV<br>Descriptive/ Long questions.  | (12 Marks) |
| Q.5 – Objective / Short Questions.             |            |
| 1. Unit-I and II                               | (12 Marks) |
| 2. Unit-III and IV                             | (10 Marks) |

Note: Option should be given in all questions.

**B.C.A. Semester – I**  
**BCA-103: Computer Organization**

Teaching Scheme (Per Week)		Teaching Scheme (Per Semester)		Examination Scheme					
				Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total Hours	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
4	--	40	4	30	--	70	--	100	--

**Unit - 1**

**[18 Marks]**

**Computer basics**

Digital & Analog systems, Logic levels and pulse wave forms, digital computer, Major parts of computer, Hardware, Software - Application and System Software

**Computer generations**

First generation, Second generation, Third generation, Forth generation, Fifth generation

**Classifications of Computers**

Palmtop PC, Laptop PC, Personal Computer, Workstations, Mainframe, Supercomputer.

**Operating system**

Dos, Windows Family

**Unit – 2**

**[17 Marks]**

**Introduction to Computer Parts**

**Input devices (only principles)**

Keyboard, Mouse, Light pen, Joystick, Scanner, Voice input system, Touch screen

**Output devices (only principles)**

Monitor - CRT terminals (Monitor / VDU)

Non – CRT terminals, LCD, Plasma display, LED

Printer - Dot matrix printer, Ink jet printer, Laser printer, Line printer, Plotter

**Storage devices (only principles & types)**

Magnetic memory - Magnetic disk, Hard disk, Floppy disk,

Semiconductor memory - RAM, ROM, Flash memory

Optical memory - CD, CD-ROM, CD-RAM, DVD, DVD-ROM, DVD-RAM

Cache memory, Physical & Virtual memory

**Communication devices** -Modem, NIC, Switch, Hub

**Unit - 3**

**[18 Marks]**

**Number system** - Binary, decimal, octal, hexadecimal

**Conversion** - Binary to decimal, decimal to binary, octal to decimal , decimal to octal, octal to binary, binary to octal, hexadecimal to binary, binary to hexadecimal, hexadecimal to Decimal, decimal to hexadecimal, hexadecimal to octal, octal to hexadecimal

**Binary arithmetic** – Addition, subtraction (simple method)

**Unit - 4**

**[17 Marks]**

**Logic gates** - AND, OR, NOT, NAND, NOR, Exclusive-OR, Exclusive-NOR

**Combinational circuits** - Half adder, Full adder, Half subtractor, Full subtractor

**Binary classification of codes** - 8421 BCD code, Excess-3(XS-3) code

**Data Processing circuit** - Decoder, Encoder

**Ref. Books:**

1. Fundamentals of computers – By. V. Rajaraman PHI Publication
2. Fundamentals of computers – By. Anand Kumar PHI Publication
1. Fundamentals of computers – By. B. Ram
2. O-Level (Information Technology) - By V.K.Jain (Module- M1.1)
3. Computer Architecture – By K M Hebbar MacMillan Publication

**Question Paper Scheme:****University Examination Duration: 3 Hours.**

- |                                    |            |
|------------------------------------|------------|
| Q.1 - Unit-I                       | (12 Marks) |
| Descriptive/ Long questions.       |            |
| Q.2 - Unit-II                      | (12 Marks) |
| Descriptive/ Long questions.       |            |
| Q.3 - Unit-III                     | (12 Marks) |
| Descriptive/ Long questions.       |            |
| Q.4 - Unit-IV                      | (12 Marks) |
| Descriptive/ Long questions.       |            |
| Q.5 – Objective / Short Questions. |            |
| A. Unit-I and II                   | (12 Marks) |
| B. Unit-III and IV                 | (10 Marks) |

Note: All Objective/ Short Questions are compulsory, no option will be given.

**B.C.A. Semester – I**  
**BCA-104: Communication Skills**

Teaching Scheme (Per Week)		Teaching Scheme (Per Semester)		Examination Scheme					
				Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total Hours	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
4	--	40	4	30	--	70	--	100	--

**UNIT – I      Theory of Communication      [18 Marks]**

- Communication – Meaning and Objectives
- Communication – Process and Importance
- Communication – Barriers
- Methods of Communication - Verbal and Non-Verbal
- Dimensions of Communication – Upward, Downward, Diagonal, Horizontal, Grapevine
- Steps of Effective Communication

**UNIT – 2      Grammar      [17 Marks]**

- Parts of Speech
- Subject Verb Agreement
- Active Passive
- Indirect Speech
- Auxiliaries and Modals
- Questions and Negatives

**UNIT – 3      Business Communication      [20 Marks]**

- Application for Job, Loan, Leave, Demanding Original Documents from Office
- Business Letters for Inquiry, reply, Quotation, Placing of Order, Complaint, Adjustment
- Comprehension
- Paragraph Writing

**UNIT – 4      Listening and Speaking      [20 Marks]**

- Importance of Listening
- Listening Process
- Barriers of Listening

- Guidelines for Effective Listening
- Speech Preparation
- Guidelines for Effective Speaking
- Group Discussion – Meaning, Objectives, Methodology
- Guidelines for Group Discussion
- Interview – Types, Preparation
- Conducting and Appearing for Interview

### **Reference Books:**

Business Communication - Meenakshi Raman & Prakash Singh – Oxford Publication

Business Communication – V.K. Jain & Omprakash Biyani – S.Chand

Essential of Business Communication – Rajendra Pal & J.S. Korlahalli – S. Chand

Business Correspondence – R.C. Sharma & Krishna Mohan – Tata McGraw Hill

Developing Communication Skills – Krishna Mohan & Meera Benarji – McMillan Pub.

English Grammar – Wren& Martin

English Grammar Composition and Effective Business Communication – Pink & Thomas – S. Chand

### **Question Paper Scheme:**

#### **University Examination Duration: 3 Hours.**

Q.1 - Unit-I (12 Marks)

Descriptive/ Long questions.

Q.2 - Unit-II (12 Marks)

Descriptive/ Long questions.

Q.3 - Unit-III (12 Marks)

Descriptive/ Long questions.

Q.4 - Unit-IV (12 Marks)

Descriptive/ Long questions.

Q.5 – Objective / Short Questions.

A. Unit-I and II (12 Marks)

B. Unit-III and IV (10 Marks)

Note: Option should be given in all questions.

**B.C.A. Semester – I**  
**BCA-105: Fundamentals of Programming Language 'C'(Practical)**

Teaching Scheme (Per Week)		Teaching Scheme (Per Semester)		Examination Scheme					
				Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total Hours	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
--	4	40	4	--	30	--	70	--	70

**(Practical List)**

1. Write a C program to display "hello computer" on the screen.
2. Write a C program to print roll no, name and address.
3. Write a C program to find the area of circle using the formula  $\text{Area} = \pi * r * r$ .
4. Write a C program to find the area of rectangle, cube and triangle.(Formula are: Rectangle= $l * b$ , triangle =  $(l * b) * 0.5$ , cube =  $L * L * L$
5. Write a C program to find the area and volume of sphere. Formulas are  $\text{Area} = 4 * \pi * R * R$  Volume =  $4/3 * \pi * R * R * R$ .
6. Write a C program to evaluate simple interest  $I = P * R * N / 100$ .
7. Write a C program to enter a distance into K.M and convert it in to meter, feet, inches and Centimeter
8. Write a C program to interchange two numbers.
9. Write a C program to convert Fahrenheit into centigrade
10. Write a C program for summation, subtraction, multiplication, division of two number using Arithmetic operator
11. Write a C program to enter days and convert into years, month and reminder days.
12. Write a C program to find out the largest value from given three numbers using conditional Operator
13. Write a C program to find the maximum number from given three numbers.
14. Write a C program to find that the enter number is Negative, or Positive or Zero.
15. Write a C program to Checked whether entered char is capital, small, digit or any special Character
16. Write a C program to read number 1 to 7 and print relatively day Sunday to Saturday.
17. Write a C program to find out the max. and min. number from given 10 numbers.
18. Write a C program to find the sum of digit of accepted number.
19. Write a C program to find the sum of first 100 odd numbers. And even numbers.
20. Write a C program to display first 25 Fibonacci nos.
21. Write a C program to check the accepted number is prime number or not.
22. Write a C program to display first' 100 prime numbers.
23. Write a C program to find factorial of accepted numbers.
24. Write a C program to print accepted no and its reverse number.
25. Write a C program to find whether the accepted number is palindrome or not.
26. Write a C program to convert decimal numbers into equivalent binary number.
27. Write a C program to convert decimal numbers into equivalent to octal number.



28. Write a C program to convert decimal numbers into equivalent hexadecimal number.
29. Write a C program to display first 5 Armstrong number.
30. Write a C program to arrange the accepted numbers in ascending order and descending order.
31. Write a C program to find whether the accepted string is palindrome or not.
32. Write a C program to convert given line into upper case or lower case.
33. Write a C program to count no of word, character, line and space from given text.
34. Write a C program to sort given string in ascending order.
35. Write a C program to prepare pay slip using following data.

Da = 10% of basic, Hra = 7.50% of basic, Ma = 300,

Pf = 12.50% of basic, Gross = basic + Da + Hra + Ma, Nt = Gross – Pf.

36. Write a C program to read marks and your program will display grade. Marks Grade

100– 80	Dist
60– 79	First
50– 59	Second
35– 49	Pass
0– 34	Fail

37. Write a C program to find  $1 + 1/2 + 1/3 + 1/4 + \dots + 1/n$ .

38. Write a C program to display following output on the screen.

```
1
12
123
1234
```

39. Write a C program to display following output on the screen.

```
1
22
333
4444
```

40. Write a C program to display following output on the screen.

```
0
1 1
2 0 1
0 1 0 1
1 0 1 0 1
```

41. Write a C program to display following output on the screen.

```
2
3 2
3 3 3
4 4 4 4
5 5 5 5 5
```

42. Write a C program to display following output on the screen.

```
1
2 3
4 5 6
7 8 9 10
```

43. Write a C program to display following output on the screen

```
*
* *
* * *
* * * *
* * * * *
```

44. Write a C program to display following output on the screen.

```
      *
    * *
  * * *
* * * *
* * * * *
```

45. Write a C program to display following output on the screen.

```
      1
    2 3
  4 5 6
7 8 9 10
11 12 13 14 15
```

46. Write a C program to display following output on the screen

```
C
CP
CPR
CPR0

.....
CPROGRAMMING

.....
CPR0
CPR
CP
C
```

47. Write a C program to find maximum & minimum value from the given array.

48. Write a C program to find next minimum from the given array.

49. Write a c program to input N and find out the sum, average, max, min, total even no and total odd no. [with out use of array]

50. Write a c program to input N no and find out the sum, average, max, min, total even no and total odd no. [using array]

51. Write a c program to display the two matrix on screen and perform the addition of two matrix and print on screen.

52. Write a c program to display the two matrix on screen and perform the multiplication of two matrix and print on screen.

### Practical Exam Scheme:

University Examination Duration: 3 Hours (Per Batch)

Practical	Viva	Journal	Total
40 Marks	20 Marks	10 Marks	70 Marks

**B.C.A. SEM - I**  
**BCA 106 : Database Management System and PC Packages (Practical)**

Teaching Scheme (Per Week)		Teaching Scheme (Per Semester)		Examination Scheme					
				Internal		External		Total	
Th. (Hours)	Pr. (Hours)	Total Hours	Credit	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)	Th. (Marks)	Pr. (Marks)
--	4	40	4	--	30	--	70	--	70

**I. Operating System and working with files / folders**

- Introduction of Operating System: DOS and Window
- DOS: Internal & External commands, File naming rules, Creating/Editing file, Create batch file
- Window based operating system and its terminologies

**II. Word Processing**

Word Essentials, The Word Workplace, Typing and Editing, Typing and Revising, Finding and Replacing, AutoCorrect and AutoText: Reusing Text & graphics, Editing and Proofing Tools, Formatting Text, Formatting Text Characters, Formatting Paragraphs, Formatting and Sorting Lists, Automatic Formatting and Styles, Document Templates, Page Design and Layout, page Setup, Margins, Page Numbers, and Other Items, Newspaper-Style Columns, working with Tables, Working with Long Documents, Outlining and Organizing a document, File Management, Opening, Saving, and Protecting Documents, locating and Managing Documents, Printing, Assembling Documents with Mail Merge, Mail Merge- Step by Step, Mail Merge-Advanced Techniques, Automating Your Work.

Practical may be given for

- Create your bio-data with use bold, italic, underline tools and save that document set the alignment left, right & center with table.
- Create a Time table.
- Create a macro.
- Create a mail- merge.

**III. Spreadsheet Application**

Essential Skills, Starting Microsoft Excel, Managing Workbook Files, Working in Workbooks, Selecting Cells and Choosing Commands, entering Data, Using Formulas to Calculate Values, Editing a Worksheet, formatting a Worksheet, Printing, Consolidating Data, Creating Charts (graphs), Chart Types, Auto formats, Changing Data in a Chart, Formatting a Chart, Organizing and Analyzing Data in a List Using a List to Organize, data sorting and filtering Data in a List Summarizing Data in a List, Presenting, Reviewing, and Sharing Workbooks, Creating Graphic Objects on Worksheets and Charts, Auditing and Adding Comments to Documents, Protecting a

Workbook, Exchanging Data with Other Applications, Sharing Data and Graphics with Other Applications, Importing and Exporting Documents, Switching from Other Applications.

Practical may be given to create

- Pivot table
- Macro facility
- Student mark sheet using formula & chart
- Salary sheet using formula & chart

#### **IV. Multimedia Presentation**

Creating a presentation, Inserting/Deleting slides, Different slide views, Editing slides, Slide transition & editing special effects, Inserting sound, picture, chart, organization chart, Inserting clip art, Applying Transition Effect and Animation Effect.

Practicals may be given to perform

10. Create a presentation using all elements like

Slide view, transactions, animation, sound, picture and chart (Minimums 5 slide).

#### **28. GUI Based Database Tool**

- Create a database with different data types using wizard.
- Create a Relationship between two or more tables (Usage of Primary key and foreign key).
- Create a table to Insert, Delete, Update and Search record into database.
- Create a form to enter the data using form Insert, Delete, Update and Search records.
- Create a table and perform the query.  
(Select Query, Cross tab Query, Make-table Query, Update Query, Append Query, Delete Query and Query for the select one record, all record, update record, delete record).
- Create a Report using wizard. (Auto Report, A Report Wizard, A Label wizard, A Chart Wizard)
- Create a Project on
  - Student information system
  - Employee Information/Salary system
  - Electricity Billing system

#### **Practical Exam Scheme:**

University Examination Duration: 3 Hours (per batch).

<b>Practical</b>	<b>Viva</b>	<b>Journal</b>	<b>Total</b>
40 Marks	20 Marks	10 Marks	70 Marks