R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA) (SCHEME)
First Semester

S. No	Subject Code	Subject Name	Marks Distribution						Total Marks
			Assignment Marks		Theory Marks		Practical Marks		
			Max	Min	Max	Min	Max	Min	
1	FC-101/1	English Language	10	4	40	14	-	-	50
2	FC-101/2	Development of Entrepreneurship	10	4	40	14	-	-	50
3	BC-102	Computer Fundamentals	20	7	80	27	-	-	100
4	BC-103	PC Software	20	7	80	27	-	-	100
5	BC-104	Digital Computer Electronics	20	7	80	27	50	17	150
6	BC-105	Communication and Management	20	7	80	27	50	17	150
		Total	100	36	400	136	100	34	600

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./ B.Com./B.Sc

Semester – I

Course	Subject	Subject Code
B.C.A.	**English Language**	**FC-101/1**

COURSE OUTCOME

C 01: In this course students will read and understand about the rich classical texts from Indian literatures written in Hindi as well as Indian literatures written in Urdu, in translated versions

C 02: Upon the completion of course the students will be able trace the nature of influence that the classical texts have on modern English literatures

C 03: Know about various innovative ways of using English language in verbal and non-verbal communications.

C 04: Write clearly, effectively, and creatively, and adjust writing style appropriately to the content, the context, and nature of the subject.

C 05: Think about the relation between language and literature

Unit-I

1. Amalkanti : Nirendranath Chakrabarti
2. Sita : Toru Dutt
3. Tryst with Destiny : Jawaharlal Nehru
4. Delhi in 1857 : Mirza Ghalib
5. Preface to the Mahabharata : C. Rajagopalachari
6. Where the Mind is Without Fear : Rabindranath Tagore
7. A Song of Kabir : Translated by Tagore
8. Satyagraha : M.K. Gandhi
9. Toasted English : R. K. Narayan
10. The Portrait of a Lady : Khushwant Singh
11. Discovering Babasaheb : Ashok Mahadevan

Unit-II

Comprehension

Unit-III

Composition and Paragraph Writing (Based on expansion of an idea).

Unit-IV

Basic Language Skills: Vocabulary – Synonyms, Antonyms, Word Formation, Prefixes and Suffixes, Words likely to be confused and Misused, Words similar in Meaning or Form, Distinction between Similar Expressions, Speech Skills

Unit-V

Basic Language Skills: Grammar and usage – The Tense Forms, Propositions, Determiners and Countable/Uncountable Nouns, Verb, Articles, Adverbs.

Prescribed Books: English Language and Indian Culture, Published by M.P. Hindi Grant Academy.

Note:- Eight questions to be set from unit-1 and four to be attempted.

R.K.D.F. UNIVERSITY, BHOPAL

B.Com./B.A./B.Sc./B.Sc. (Home Science)/B.A. (Management)/B.C.A.

FIRST YEAR

Semester – I

Course	Subject	Subject Code
B.C.A.	**Development of Entrepreneurship**	**FC-101/2**

COURSE OUTCOME

C 01: In this course students will learn and understand the meaning of entrepreneurship, types and functions of an entrepreneur, sequenced planning and guiding capacity explanation.

C 02: Upon the completion of the course the students will be able to discern distinct entrepreneurial traits

C 03: They will understand the systematic process to select and screen a business idea

C 04: Students will be able to design strategies for successful implementation of ideas

C 05: They will be able to prepare and analyse Project Report and interpret the same.

Unit - I

Entrepreneurship- Definition, Characteristics and importance, Types and functions of an entrepreneur, merits of a good entrepreneur motivational factors of entrepreneurship.

Unit - II

(a) Motivation to achieve targets and establishment of ideas. Setting targets and facing challenges. Resolving problems and creativity. Sequenced planning and guiding capacity, Development of self-confidence.

(b) Communication skills, Capacity to influence, leadership.

Unit - III

(a) Project Report - Evaluation of selected process. Detailed project report – Preparation of main part of project report pointing out necessary and viability.

(b) Selecting the form of Organization – Meaning and characteristics of sole Proprietorship, Partnership and cooperative committees, elements affecting selection of a form of an organisation.

(c) Economic management – Role of banks and financial institutions banking, financial plans, working capital-evaluation and management, keeping of accounts.

R.K.D.F. UNIVERSITY, BHOPAL

B.Com./B.A./B.Sc./B.Sc. (Home Science)/B.A. (Management)/B.C.A.

FIRST YEAR
Semester – I

Unit - IV

(a) Production management. Methods of purchase. Management of movable assets/goods. Quality management. Employee management. Packaging.

(b) Marketing management. Sales and the art of selling. Understanding the market and market policy. Consumer management. Time management.

Unit - V

(a) Role of regulatory institutions – district industry centre, pollution control board, food and drug administration, special study of electricity development and municipal corporation.

(b) Role of development organizations, khadi & village Commission/ Board, MP Finance Corporation, scheduled banks, MP Women's Economics Development Corporation.

(c) Self-employment-oriented schemes, Prime Minister's Employment schemes, Golden Jubilee Urban environment scheme, Rani Durgavati Self-Employment scheme, Pt. Deendayal Self-employment scheme.

(d) Various grant schemes – Cost-of-Capital grant, interest grant, exemption from entry tax, project report, reimbursement grant, etc.

(e) Special incentives for women entrepreneurs, prospects & possibilities.

(f) Schemes of M.P. Tribal Finance Development Corporation, schemes of M.P. Antyavasai Corporation, schemes of M.P. Backward Class and Minorities Finance Development Corporation.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – I

Course	Subject	Subject Code
B.C.A.	**Computer Fundamentals**	**BC-102**

Course Outcomes:

CO1: To acquire the knowledge of Computer System and its Generations
CO2: To acquire the knowledge of Input devices, Output devices and Storage devices
CO3: To acquire the knowledge of Programming Languages its advantage and disadvantage
CO4: To understand the concept of Software and Operating Systems with application
CO5: To acquire the knowledge of Algorithms and Flow Charts of a programme

Unit – I

Introduction of Computers: Computer System, System Characteristics and capabilities, Types of Computers: Analog, Digital (Micro, Mini, Mainframe & Super Computers), Generation of Computers.

Unit - II

Computer Organisation: Block Diagram of Computer and its functional units.
Input Devices - KeyBoard, Scanner, Mouse, Light Pen, Bar Code Reader, OMR, OCR, MICR., Track ball, Joystick, Touch Screen etc.,
Output Devices: Monitors – Classification of Monitors based on Technology (CRT Monitor & Flat panel LCD Monitor), Printers – Dot Matrix Printer, Ink Jet Printer, Laser Printer and Plotters, Types of Plotters – Drum Plotter and Flat Bed Plotters, LCD Projectors.
Storage Devices: Magnetic tapes, Floppy Disks, Hard Disks, Compact Disc – CD-ROM, CD-RW, VCD, DVD, DVD-RW.

Unit – III

Programming Languages: History, Classifications – Low Level, Assembly & High Level languages, Advantages & Disadvantages Programming Languages.

Unit – IV

Types of Software: System Software – Translators(Compilers, Interpreters, Assemblers), Operating System, Linkers, Libraries & Utilities, Application Software – Packaged & Tailored Softwares.
Operating Systems: Introduction, Types of O.S. – Single User, Multi User – Multi Programming, Multi-Tasking, Real Time, Time Sharing, Batch Processing, Parallel Processing, Distributed Processing.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – I

Unit – V

Program Planning: Purpose of Program Planning, Steps in Program Development, Characteristics of a Good Program, Algorithms, Flow Charts through examples.

Text Book:

1. Computer Fundamentals By P.K. Sinha
2. Operating System By Peterson

Reference Books:

1. Easy Approach To Computer Course By G.K. Iyer
2. Computer Today By S.K. Basandra
3. Operating System By Godbole
4. 'O' Level Programming Concepts & Systems By V.K. Jain

Course	Subject	Subject Code
B.C.A.	**PC Software**	**BC-103**

Course Outcomes:

CO1: To acquire the knowledge of Disk Operating System with Internal Commend and external Command

CO2: To acquire the knowledge of Installation of MS Office with its different versions

CO3: To acquire the knowledge of Word Processing and its advantages

CO4: To acquire the knowledge of Spread sheet with its utility in Excel

CO5: To acquire the knowledge of Making a Formula in Excel

Unit – I

Microsoft Disk Operating System: Introduction, History and Versions of DOS, Fundamentals of DOS, Booting Process, Internal DOS Commands, Files and Directories, Elementary External DOS Commands: Scandisk, Format, DiskCopy, Tree, Deltree, Fdisk, More, Edit, Mem, Creating Batch Files. Introduction to Windows: Control Panel & Accessories.

Unit – II

Introduction to Word Processing (MS Word): Advantages of Word Processing, Introduction and Installation, Editing a File, Using Paragraph Styles, Coping a block to another File, Newspaper Style Columns, Using Macro.

Unit – III

Advanced Word Processing: Headers And Footers, Finding Text, Setting Up Printers, Printing & its formatting, Mail Merge And Other Applications, Mathematical Calculations.

Unit – IV

Introduction To Spreadsheet (Excel): Definition And Advantages of Electronic Worksheet, Working on Spreadsheets, Range & Related Operations, Setting, Saving And Retrieving Worksheet File, Inserting, Deleting, Copying And Moving Of Data Cells, Inserting And Deleting Rows & Columns, Erasing The Worksheet.

Print preview of Worksheet, Page Margins, setting & adding headers & footers before printing, removing grid lines from printout, printing the title rows.

Unit – V

Functions and Other Features: Classification And Usage Of Various Built-In-Functions In Worksheet, Passwords, Protecting A Worksheet Or Range, Transferring Data To And From Non Worksheet Files, Database Handling, Creating, Naming & Executing Macros In Worksheet Using @ If To Make A Formula, Default Settings.

Text Book:

1. P C Software by R K Taxali, TMH

Reference Books:

1. Windows Based Computer Courses By Gurvinder Singh & Rachhpal Singh
2. Ms-Office Interactive Course By Greg Perry, Techmedia
3. Understanding Computer Fundamentals & Dos By G.K. Iyer
4. Windows Manual

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – I

Course	Subject	Subject Code
B.C.A.	**Digital Computer Electronics**	**BC-104**

Course Outcomes:

CO1: To acquire the knowledge of Number System and its conversion
CO2: To acquire the knowledge of Logic gates and their Truth Tables
CO3: To understand the fundamental of Primary and secondary memory
CO4: To acquire the knowledge of CPU organization and its types
CO5: To understand the Data transfer schemes with its applications

Unit - I

Representation of information, Number System: Binary, Octal, Hexadecimal, Conversions from one base to another base, Binary Arithmetic, Unsigned binary number, signed magnitude number, 2's complement representation, 2's complement arithmetic, ASCII Code, BCD Code, EBCDIC Code, Excess-3 Code and Gray Code.

Unit – II

Basic logic designs: Logic gates – AND, OR, NOT, NOR, NAND, XOR gates and their Truth Tables, Boolean algebra, Minimization techniques, Karnaugh map, SOP and POS forms, Combinational circuit design with gate: multiplexers & demultiplexers, Encoder-Decoder, Adders and Subtractors, Flip flops : RS, JK, Master slave flip flops, Introduction to counters and registers.

Unit – III

Memory: Memory cell, Primary memory—RAM, ROM, PROM, EPROM, EEPROM, Cache memory, Secondary Memory and its types, Introduction to physical memory and Virtual memory, memory accessing methods : serial and random access.

Unit – IV

Buses, Word Length of a Computer, Processing speed of a computer, Microprocessor, User Interface, Hardware, Software and Firmware concepts, General architecture of CPU, Instruction Format, Data transfer instructions, Data Manipulation instructions, Program control instructions.
Types of CPU organization: Accumulator based machine, Stack based machine and general-purpose register based machine, addressing modes: Direct, indirect, immediate, register and relative addressing modes.

Unit – V

Data transfer schemes: (1) Programmed data transfer-- synchronous, asynchronous and interrupt driven data transfer scheme, (2) Direct memory access data transfer.

Text Books:

1. Digital Principles and applications by Malvino & Leach
2. Computer Fundamentals and Architecture by B.Ram

Reference Books:

1. Computer System Architecture by M.Morris Mano
2. Digital Computer Electronics by Malvino & Brown
3. Digital Computer Fundamentals by Bartee.

Bachelor of Computer Application (BCA)
Semester – I

Course	Subject	Subject Code
B.C.A.	**Communication and Management**	**BC-105**

Course Outcomes:

CO1: To acquire the knowledge and understanding of Communication and it's important to managers

CO2: To acquire the knowledge Effective Listening

CO3: To acquire the knowledge of Verbal and Non-verbal Communication

CO4: To develop the understanding of Business Communication and its impact on real life.

CO5: To acquire the knowledge of Drafting an Official Letters

Unit – I

Introduction: Communication – Definition, Nature, Objectives, Importance to Managers, Communication Theories and Processes. Symbiotic Interactionism. Information Theory, Transaction theory, Elements of Communication. Importance of Feedback.

Unit – II

Dimensions of Communication & Directions of Communication, Media/ Means of Communication – Verbal (oral & written), Non-verbal Oral Communication, Effective Listening, Principles of Effective Communication.

Unit – III

Non –Verbal Communication – Gesticulation, sign language / Visual and audio elements, Channels of Communication—Formal, Informal/ Grapevine, Barriers to communication, Oral Business Communication – Speeches, Interviews, Group Discussions, Conference.

Unit – IV

Written Business Communication –Concept, Advantages, Disadvantages and Importance, Need of business letters, Kinds of business letters, Writing Skills, Essentials of an effective business letter, structure of a business letter, Enquiries, Replies, Orders, Credit and Reference letters, Supply letters, Dunning letters, Sales letters, Circular letters.

Unit – V

Drafting –Official letters, D.O. letters, application for jobs. Report Writing –Importance of reports, Types of Business reports, Chairman's Speech, Reports of Committees.
Modern Forms of Communication—fax, E-Mail, Video Conferencing, (International Communication Adapting to Global business).

Text Books:-

1. Business Communication- Sahitya Bhawan Publication.

References: -

1. Business Communication by Virendra Kumar.
2. Business Communication & Organisation Management By Rohini Agalwal.

Practical's List

DOS:

1. Use DOS commands for the following purpose from the root directory:
   a. Create a directory ‚College'
   b. Go to the college directory
   c. Copy all document files from root directory to college directory
   d. Delete the ‚College' directory
2. Create a text file and type your name and address in 3 lines and save it using DOS prompt.
3. Create a batch file to execute MS Word application.
4. Use specific DOS commands for the purpose as mentioned below:
   a. View the files stored in the root directory
   b. List the complete details of all the files in ascending order
   c. View the files according the file type
   d. Rename all ‚.txt' files with extension ‚.axt'
5. Create a Path command from the root directory to run a batch file stored in your working directory.

MS Word:

1. Design your College Banner.
2. Write your syllabus of PC Software using formatting & Editing properties as mentioned in your syllabus – Cut, Copy, Paste, Bold, Underline, Indentation, Font Size, Paragraph line spacing.
3. Write an appointment letter for Marketing Executive of ‚ABC Company' using the company's letterhead.
4. Using ClipArt & WordArt, insert images in your document and design it with text special effects and background effects.
5. Write your bio-data using formatting tools – colors, numbers/bullets, alignment, border.
6. Write a birthday invitation to your friends using mail merge.
7. Create a macro to print the College name ‚Sri Sathya Sai College for Women, Bhopal'.
8. Design your Timetable using Table and its formatting features.

MS Excel

1. Design your class Time Table.
2. Prepare a Mark Sheet of your class subjects.
3. Prepare a Salary Slip of an employee.
4. Prepare a bar chart & pie chart for analysis of Election Results.
5. Prepare a generic Bill of a Super Market.
6. Work on the following exercise on a Workbook:
   a. Copy an existing Sheet
   b. Rename the old Sheet

     c. Insert a new Sheet into an existing Workbook

     d. Delete the renamed Sheet.

7. Prepare an Attendance sheet of 10 students for any 6 subjects of your syllabus. Calculate their total attendance, total percentage of attendance of each student & average of attendance.

8. Create a worksheet on Students list of any 4 faculties and perform following database functions on it.

     a. Sort data by Name

     b. Filter data by Class

     c. Subtotal of no. of students by Class.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
SCHEME
Second Semester

S. No	Subject Code	Subject Name	Marks Distribution						Total Marks
			Assignment Marks		Theory Marks		Practical Marks		
			Max	Min	Max	Min	Max	Min	
1	FC-201/1	fgUnh Hkk"kk lajpuk	10	4	40	14	-	-	50
2	FC-201/2	Environment	10	4	40	14	-	-	50
3	BC-202	Business Mathematics	20	7	80	27	-	-	100
4	BC-203	Desktop Publishing (DTP)	20	7	80	27	50	17	150
5	BC-204	Programming in 'C'	20	7	80	27	50	17	150
6	BC-205	Accounting Management	20	7	80	27	-	-	100
			100	36	400	136	100	34	600

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./ B.Com./B.Sc
Semester – II

Course	Subject	Subject Code
B.C.A.	fgUnh Hkk"kk lajpuk	FC-201/1

COURSE OUTCOME

C 01 : पाठ्यक्रम पूरा करने के बाद, एक शिक्षार्थी को हिंदी भाषा के बारे में एक उन्नत समझ होगी

C 02: पाठ्यक्रम पूरा करने के बाद, लेख लिखने के साथ–साथ अधिग्रहण करने के लिए एक शिक्षार्थी, वक्तृत्व में और हिंदी भाषा में अध्ययन में निपुणता होग

C 03: हिंदी विद्वानों को बढ़ावा देने के लिए और उन्हें प्रासंगिक लिखने और अनुवाद करने के लिए प्रोत्साहित करने के लिए

C 04: छात्रों को उनकी समृद्ध सांस्कृतिक, नैतिक, साहित्यिक और वैज्ञानिक विरासत और के लिए जागृत करना

bdkbZ &1

Hkkjr oanuk ¼dkO;½   %   lw;Zdkar f=ikBh ^fujkyk*
tkx rq>dksa nwj tkuk   %   lqJh egknsoh oekZ
Lora=rk iqdkjrh ¼dkO;½   %   t;'kadj ^izlkn*
ge vfudsru ¼dkO;½   %   ckyd`".k 'kekZ ^uohu*
Hkk"kk dh egRrk vkSj mlds fofo/k :lk
Hkk"kk&dkS'ky

bdkbZ &2

d:.kk ¼fuca/k½   %   vkpk;Z jkepUnz 'kqDy
leUo; dh izfdz;k ¼fuca/k½   %   jke/kkjh flag ^fnudj*
fcPNh cqvk ¼dgkuh½   %   MkW- y{e.k fo"V ^cVjksgh*
vuqokn   %   ifjHkk"kk izdkj] egRo] fo'ks"krk,a
fgUnh dh 'kCn&laink
ifjHkkf"kd 'kCnkoyh

bdkbZ&3

foyk;r igq¡p gh x;k ¼vkRedFkka'k½   %   egkRek xka/kh
vQlj ¼O;aX;½   %   'kjn tks'kh
rhFkZ;k=k ¼dgkuh½   %   MkW- fefFkys'k dqekjh feJ
edM+h dk tkyk ¼O;aX;½   %   MkW- jkeizdk'k lDlsuk
okD;&lajpuk% rRle] rn~Hko ns'kt fons'kh

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./ B.Com./B.Sc
Semester – II

Course	Subject	Subject Code
B.C.A.	**Environment**	**FC-201/2**

bdkbZ&4

vli nhiks Hko ¼oDr`Ro dyk½   %   Lokeh J)kuUn
Hkkjr dk lkekfld O;fDrRo ¼izLrkouk½   %   tokgjyky usg:
Ik= eSlwj ds egkjktk dks ¼i=&ys[ku½   %   Lokeh foosdkuUn
cuh jgsxh fdrkcsa ¼vkys[k½   % MkW- lquhrk jkuh ?kks"k
i=&ys[ku % egRo vkSj mlds fofo/k :Ik
lM+d ij nkSM+rs bZgk e`x ¼fuca/k½ MkW- ';kelqUnj nqcs

bdkbZ&5

;ksx dh 'kfDr ¼Mk;jh½   %   MkW- gfjoa'kjk; cPpu
dks'k ds v[kkMs+ esa dksbZ igyoku ugh mrjrk %   Hkk"kkfon~ MkW- gjnso ckgjh
ls izks- f=HkqouukFk 'kqDy
¼lk{kkRdkj½
uhxzks lSfud ls HksaV ¼;k=k&laLej.k½   %   MkW- nsosUnz lR;kFkhZ
;fn ck u gksrh rks 'kk;n xka/kh dks ;g Å¡pkbZ u feyrh ¼lk{kkRdkj½ 5 dFkkdkj fxfjjkt
fd'kksj ls lR;sUnz 'kekZ
Lkj&ys[ku] Hkko&iYYou Lkk{kkRdkj iz;kstu vkSj dkS'ky
fu/kkZfjr ikB~; iqLrd   %   ^^fgUnh Hkk"kk lajpuk** e/;izn's'k fgUnh
xzUFk vdkneh }kjk

izdkf'kr

COURSE OUTCOME

C 01: The subject facilitate the students' understanding of complex environmental issues from a problem-oriented, interdisciplinary perspective

C 02: Understand environmental problems and ways of addressing them, including interactions across local to global scales.

C 03: Upon the completion of the course the students will be able to appreciate the ethical, cross-cultural, context of environmental issues and the links between human and natural systems.

C 04: They will reflect critically about their roles and identities as citizens, consumers and environmental actors in a complex, interconnected world.

Unit-I

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./ B.Com./B.Sc

Semester – II

Study of Environmental and ecology:

(a)   Definition and Importance.   (b)   Environmental Pollution and problems.

(c) ʊ Public participation and Public awareness.

ʊ   ʊ

ʊ

Unit-II

Environmental Pollution:

(a)   Air, water, noise, heat and nuclear pollution.

(b)   Causes, effect and prevention of pollution.

(c)   Disaster management – Flood, Earthquake, cyclones and landslides.

Unit-III

Environment and social problems:

(a)   Development – non-sustainable to Sustainable.   (b)   Energy problems of cities.

(c)   Water preservation – rain-water collection.

Unit-IV

Role of mankind in conserving natural resources:

(a)   Food resources – World food problem   (b) Energy resources – increasing demand for energy.

(c)   Land resources – Land as resources.

Unit-V

Environment conservation laws:

(a)   Conservation laws for air and water pollution.

(b)   Wildlife conservation laws.

(c)   Role of information technology in protecting environment & health.

R.K.D.F. UNIVERSITY, BHOPAL

Bachelor of Computer Application (BCA)

Semester – II

Course	Subject	Subject Code
B.C.A.	**Business Mathematics**	**BC-202**

Course Outcomes:

CO1: To acquire the knowledge of basics of Trigonometry

CO2: To learn the theory of Indices and the type of Matrices

CO3: To understand the Frequency Distribution with Measure of Central Tendency

CO4: To acquire the knowledge of Determinant and Matrices

CO5: To understand the meaning of Limits & Continuity with examples

Unit – I

Trigonometry: Angles & their Measurement, Values of Trigonometric Ratios and their Graphical Representations, Height and Distances.

Unit – II

Theory of Indices, Definition & Types of Matrices, Special Matrices, Elementary Transformation of Matrices, Sparse Matrices.

Unit – III

Frequency Distribution, Histogram, Measure of Central Tendency, Mean, Mode, Median, Standard Deviation.

Unit – IV

Determinant And Matrices, Special Matrices, Inverse of a Matrix. Ratio And Proportion, Percentage, Commission & Brokerage, Discount, Profit & Loss.

Unit – V

Limits & Continuity, Limits of Functions, Infinite Limits, Limits at Infinity, Continuous Function, Differentiation of 1st and 2nd Order, Integration – finite, infinite, addition, subtraction & multiplication.

Text Books:

1. Business Mathematics By S.M. Shukla.
2. Fundamental of Statistics By Elhance & Elhance.

Reference Books:

1. Mathematical Statistics By H.S. Sharma
2. Differential & Integral Calculus By Ray & Seth
3. Matrices By Ray & Seth.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – II

Course	Subject	Subject Code
B.C.A.	**Desktop Publishing (DTP)**	**BC-203**

Course Outcomes:

CO1: To develop the basic understanding of DTP Package
CO2: To acquire the knowledge of PageMaker and Preparation of Document Using DTP Package
CO3: To acquire the knowledge of various types of Printers used in DTP.
CO4: To understand the commercial DTP System that is available in market
CO5: To acquire the knowledge of Import & Export of Documents in Word Processors

Unit – I

Why Graphics? Various Types of Graphics Programs, Drafting Packages, DTP Package, Microsoft Windows. Various Documentation cum DTP Packages e.g. Word Perfect, Microsoft Word Etc.

Unit – II

Introduction to PageMaker / Ventura or a similar Package. Preparation of Document Using DTP Package.

Unit – III

Text Formatting, Different Page Layouts, Printing Various Fonts and Character Sets. Various types of Printers used in DTP.

Unit – IV

Introduction to Commercial DTP System available in market, Indian Language Fonts, Creation of Indian Language Fonts.

Unit – V

Import & Export of Documents created by other Word Processors, Spelling Check, and Designing exercise like Visiting Card, Greeting Cards etc.

Text Books:
1. Desktop Publishing on PC by M C Sharma, BPB Publication.
2. Page Maker 6 By BPB Publications.

Reference Books:
1. Page Maker – Manual.
2. O' Level Module M3.2 Desktop Publishing & Presentation Graphics By V K Jain, BPB Publications.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – II

Course	Subject	Subject Code
B.C.A.	**Programming in 'C'**	**BC-204**

Course Outcomes:

CO1: To acquire the knowledge of basics of C language

CO2: To acquire the knowledge of Decision control structure and arithmetical operators

CO3: To acquire the knowledge of concept of loops with examples

CO4: To acquire the knowledge of development of C programs using Arrays &functions

CO5: To acquire the knowledge of how elements are stored in array

Unit – I

Program Logic development Using algorithm and Flowchart, Historical development of ‗C‗, constants, variables and keywords, ‗C‗ instructions. Data types – int, float, double, char, void, short, long, long double, signed, unsigned.

Unit – II

Decision control structure:- if statement, if-else statement , the conditional operators. Case control structure: switch statement, goto statement. ‗C‗ operators: Arithmetic, relational and logical. Development of ‗C‗ program using Decision control & Case control structure.

Unit – III

Operators:- Increment and Decrement operators, Bitwise operator, Operators precedence, arithmetic and logical expressions evolution. Loop Control Structure:- for loop, while loop and do-while loop, Break statement, continue statement. Development of C‗ programs using loops.

Unit – IV

Arrays: One dimension array, 2D array, 3D array, Introduction to Pointers. Functions: Function declaration and prototypes, Passing values between functions:- call by value. Development of ‗C‗ programs using Arrays, functions.

Unit – V

Storage classes in ‗C‗, Structures:- declaring a structure, accessing structure element, how structure elements are stored, array of structures, union.

Text Books:

1. Let US C by Yashwant Kanitkar
2. Programming in C by E. Balaguruswami

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – II

Reference Books:

1. Schaum's Series ‚C' Programming
2. The complete reference in C/C++ Herbert Shield
3. Working with C by Yashwant Kanitkar

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – II

Course	Subject	Subject Code
B.C.A.	**Accounting Management**	**BC-205**

Course Outcomes:

CO1: To understand the basic concept of Accounting

CO2: To understanding the fundamentals of insurance method, Sinking Fund Method

CO3: To develop basic knowledge of Cash Book, Bills of Exchange

CO4: To develop a basic understanding of profit and loss account

CO5: To acquire the knowledge of Financial Statements and its analysis

Course Contents:

Unit – I

Introduction and Purpose of Accounting and Uses of Accounting Information, Basic Accounting Concepts, Accounting Structure, Process of Accounting, Journal, Ledger & Trial Balance based on Double Entry Book – Keeping.

Unit – II

Valuation of Assets and Depreciation Methods: Straight Line Method, Diminishing Balance Method, Sinking Fund Method, Insurance Method and Aunty Method.

Unit – III

Practical System of Accounting: Cash Book, Sales & Purchase of Goods, Bills of Exchange, Bank Reconciliation Statement.

Unit – IV

Preparation of Financial Statements: Income Statement (Profit & Loss Account), Statement of Financial Position (Balance Sheet) and Adjustment.

Unit – V

Analysis of Financial Statements – Financial Ratio.

Reference Books:

1. Management Accounting By Hingorani, Grewal.
2. Financial Management By Khan & Jain.
3. Management Accounting by Shashi K Gupta, S Chand Publication.
4. Financial Accounts by Dr S M Shukla, Sahitya Bhavan Publications.

Practical's List

PageMaker

1. Create a Greeting Card for New Year.
2. Create a Visiting Card.
3. Create your Resume.
4. Create an advertisement for job in well-known form.
5. Create a Newspaper Report.
6. Create a document by importing Graphic Image from Clip Art.
7. Create a Wedding Card.
8. Type a document using Story Editor.
9. Input a text from Word Document into a PageMaker document.
10. Create a document on Importance of Text Wrap, applying proper font size, tabs, alignment & indentation.

'C' Programming

1. Program to find roots of quadratic equations.
2. Program to Raise X to the power N.
3. Program for Generating Histogram.
4. Program to Add Digits of a number.
5. Program to check whether a number is prime.
6. Program to print a given number in Reverse order.
7. Program for Finding GCD of two numbers.
8. Program to generate Fibonacci series.
9. Program for Reversing an Array.
10. Program to calculate factorial of a given number.
11. Program to add series $1+x+x^2+x^3+..........+x^n$.
12. Program for linear search.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
SCHEME
Third Semester

S.No	Subject Code	Subject Name	Assignment Marks		Theory Marks		Practical Marks		Total Marks
			Max	Min	Max	Min	Max	Min	
1	FC-301/1	Values & Spirituality	10	4	40	14			50
2	FC-301/2	Environment	10	4	40	14			50
3	BC- 302	Operating System	20	7	80	27			100
4	BC-303	Database Management and Design	20	7	80	27	50	17	150
5	BC-304	Object Oriented Programming Using C++	20	7	80	27	50	17	150
6	BC-305	Organizational Behavior	20	7	80	27			100
		Total	100	36	400	109	100	34	600

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./B.Com./B.Sc
Semester – III

Course	Subject	Subject Code
B.C.A.	**Values & Spirituality**	**FC-301/1**

COURSE OUTCOME

C 01: The course aims to teach and inculcate the importance of value based living among students and give them a deeper understanding about the purpose of life.

C 02: Upon the completion of the course the students will understand the importance of value based living.

C 03: Students will understand and start applying the essential steps to become good leaders and emerge as responsible citizens with clear conviction to practice values and ethics in life.

C 04: Students will become value based professionals and will contribute in building a healthy nation.

Course Contents:

Chapter 1: VALUE EDUCATION
1.1 Objectives
1.2 Introduction
1.3 Concepts of Values
1.4 Definition and Types of values
1.5 The need for Education in values
1.6 Challenges for Value adoption
1.7 Character development
1.8 Vision of a better world
1.9 Summary
1.10 Glossary
1. 11 Suggested reading

Chapter 2: INCULCATION OF VALUES

2.1 Objectives
2.2 Introduction
2.3 Classification of values
2.4 Personal Values
2.5 Family Values
2.6 Social Values
2.7 Spiritual values

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./B.Com./B.Sc

Semester – III

Course	Subject	Subject Code
B.C.A.	**Environment**	**FC-301/2**

COURSE OUTCOME

C 01: The course aims at providing students with a broad interdisciplinary liberal arts framework for understanding the relationship between humans and their environment;

C 02: Students will contribute to and facilitate interdisciplinary research and problem solving, through independent and collaborative work

C 03: Upon the completion of the course students will be able to demonstrate an integrative approach to environmental issues with a focus on sustainability;

C 04: Communicate complex environmental information to both technical and non-technical audiences;

C 05: Reflect critically on their roles, responsibilities, and identities as citizens, consumers and environmental actors in a complex, interconnected world.

Course Contents:

Unit - I

Problems of natural resources:
  (a) Problems of water resources- Utilization of surface and ground water overutilization, flood, draught, conflict over water, Dams and related problems.
  (b) Problems of forest resources -uses and over utilization, deforestation, Dams and its effects on forests and tribes.
  (c) Problems of land resources -land as a source, erosion of land, man-induced, land slides and desertification.

Unit - II

Bio-diversity and its protection -
  (a) Value of bio-diversity -consumable use: productive use, social, alternative, moral asthetic and values
  (b) Bio - diversity and multi -diversity at global and national levels.
  (c) Threats to bio -diversity -loss of habitat, poaching of widlife, man wildlife conflicts.

Unit - III

Human population and environment
  (a) Population growth, disparities between countries.
  (b) Population explosion, family welfare programme
  (c) Environment and human health

Unit - IV

Multidisciplinary nature of environmental studies:
- **(a)** Natural resources
- **(b)** Social problems and the environment
- **(c)** Environmental awareness

Unit - V

Multidisciplinary nature of environmental studies:
- **(a)** Natural resources
- **(b)** Social problems and the environment
- **(c)** Environmental awareness

R.K.D.F. UNIVERSITY, BHOPAL

Bachelor of Computer Application (BCA)
Semester – III

Course	Subject	Subject Code
B.C.A.	**Object Oriented Programming Using C++**	**BC-304**

Course Outcomes:
CO1: To Understand the basic concepts of object-oriented programming
CO2: To acquire the knowledge of Operators in C++
CO3: To Gain the knowledge of Constructors and Destructors with its application
CO4: To acquire the knowledge of Inheritance property in C++ and its utility in programming
CO5: To acquire the knowledge of Exception handling in C++

Course Contents:

Unit – I

Principles of OOP, procedure oriented programming vs. object oriented programming, basic concepts, advantages, application of OOPs, object oriented languages. Beginning with C++: What is C++, structure of C++ program, creating, compiling, linking & executing a C++ program, Tokens, expressions & control structures, keywords, identifiers, basic data types, user-defined data types, derived data types, symbolic constants, type compatibility, variable declaration, dynamic initialization of variables, reference variables.

Unit – II

Operators in C++: scope resolution operator, memory management operators, manipulators, type cast operators, operators, operator precedence, control structures. Functions in C++: Main function, function prototyping, call by reference vs. call by value, inline functions, default arguments, const arguments, function overloading, friend functions. Classes and objects: specifying a class, defining member functions, making an outside functions inline, private member function; array within a class, memory allocation for object; static data members, static member functions, array of objects, objects as function arguments, returning objects.

Unit- III

Constructors and Destructors: Constructors, Parametric Constructors, Multiple Constructors in a class, constructors with default arguments. Dynamic initialization of objects, copy constructors, dynamic constructors, destructors. Operator Overloading & Type Conversions: Definition of Overloading, & Operator Overloading, rules for Overloading Operators, Overloading Unary Operators, Binary Operators, Binary Operators using Friends.

Unit – IV

Inheritance: defining derived classes, single inheritance, multilevel inheritance, multiple inheritance, hierarchical inheritance, hybrid inheritance, virtual base class, abstract classes, constructors in derived

classes, member class, nesting of class.

<h2 style="text-align:center">Unit – V</h2>

Pointers, virtual functions and polymorphism, pointers to objects, this pointer, pointers to derived class, pure virtual functions, exception handling in C++, managing console I/O operations, working with files :open, close, basic read-write operations on files

Text Books:

   1. Object Oriented Programming with C++ by E Balagurusamy.

Reference Books:

1. Programming in C++ by Robert Lafore
2. C++ - The complete Reference – by Herbert Schildt (TMH)
3. Programming with C++, Schaum Series
4. OOP's concepts – by David Parsson.

Course	Subject	Subject Code
B.C.A.	**Database Management and Design**	**BC-303**

Course Outcomes:

CO1: To Gain the knowledge of Database Theory, its advantage and disadvantages

CO2: To acquire the knowledge of Relational Database and the concept of Normalization

CO3: To acquire the knowledge of Relational Algebra & Fundamental Operations with SQL

CO4: To formulate SQL queries on data using basic DDL, DML and DCL commands.

CO5: To acquire the knowledge of PL/SQL programming for simple applications.

Unit – I

Basic Concepts of Data File system, its advantages and disadvantages.

Concepts of DBMS: Data, Information, Database, Components of DBMS, Architecture of a database system – Physical, Conceptual and User level, Data Independence – Logical and Physical, DBMS terminology, Data Dictionary.

Database Models: Network, Hierarchical and Relational Models, Features and Comparison of the three models. Concepts of Multitier Architecture in databases, Brief idea about the new concepts like distributed databases, parallel databases, mobile databases, temporal databases, spatial databases, geographic databases, data warehousing & data mining.

Unit – II

RDBMS: Definition, Components, Terminology, Difference with DBMS. ER-Model, ER-Diagram, ER-concepts, types of relationships. Codd's 12 rules,

Normalization: Introduction, concepts associated with normalization, key terminology: primary, candidate, foreign, alternate keys. Steps involved in normalization, 1st, 2nd, 3rd, 4th normal forms, BCNF, 5th normal form.

Unit – III

Idea about Generalization, Aggregation, Specialization.

Relational Algebra: Formal Definition, Fundamental Operations – select, project, union, set, difference, Cartesian product & rename, additional operations & extended operations. Concept of SQL sublanguages – DDL, DML, DCL, TCL, SCL etc., Embedded SQL.

Interactive SQL: Invoking sql*plus. Oracle data types, two dimensional matrix creations, modifying the structure of tables, dropping tables.

Unit – IV

DML commands: Insertion, updation, deletion operations, many faces of select command, data

constraints, logical operators, range searching, pattern matching, oracle functions, use of Alias, grouping data from tables, manipulating dates in sql, joins, Sub-queries, indexes, views, sequences, roles, synonyms, use of savepoint, rollback, commit commands, creating user accounts, granting permissions, revoking permissions. Concept of importing and exporting database files.

Unit – V

SQL: Introduction, the SQL execution environment, the SQL syntax, block structure – declarative part, executable part, exception handling part, variable declaration using %type, %rowtype, if statements, looping structures, oracle transactions, cursors & its types, cursor attributes, nesting of cursors, parameterized cursors, error handling in SQL, locks.

Text Books:

1. Database System Concepts – by Silberschatz, Korth, Sudarshan (Mc Graw Hill).
2. An Introduction to Database Systems – by Bipin Desai.
3. SQL, PL/SQL – The Programming language of Oracle – by Ivan Bayross (BPB).

Reference Books:

1. Introduction to Database Systems by C J Date (Pearsons Education).
2. SQL/PLSQL for Oracle by P.S.Deshpande (AWI).
3. ORACLE – The Complete Reference by Oracle Press (TMH).

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – III

Course	Subject	Subject Code
B.C.A.	**Organizational Behavior**	**BC-305**

Course Outcomes:

    CO1: To acquire the basic knowledge of Psychology with observation
    CO2: To study Sensation & Perception with Feelings and Emotions
    CO3: To Gain knowledge of theories of Motivation and theory of Organization
    CO4: To acquire the basic knowledge Theories of Leadership
    CO5: To Gain knowledge of Communication and its usefulness

Unit – I

What is Psychology? Whom does the Psychologist observe? What does Psychologist observe? Where does the Psychologist observe?

Unit – II

Sensation & Perception, Feelings and Emotions, Learning and Thinking.(in so far as they are applicable to Industry), Personality, Definition & Theories, Assessing Personality.

Unit – III

An Overview of Transactional Analysis as a Tool for Measuring One's Own Awareness and of helping Interpersonal Relationship in an Organisation. Theories of Organisation, Contingency Model and other Models of Organisation, Theories of Motivation. – Abraham Maslow, Herzerberg Mecleland.

Unit – IV

Group Dynamics, Structure, Process, Values of Groups, Role and Stature. Theories of Leadership, Identifying Leadership Potential.

Unit – V

Communication: Process, Methods, Barriers and Usefulness.

Text & Reference Books:

1. Organizational Behavior – by Robbins.
2. Organizational Behavior – by Luthans.
3. Organizational Behavior – by Sashi Gupta & Rozy Joshi.

Course	Subject	Subject Code
B.C.A.	**Operating System**	**BC-302**

Course Outcomes:

CO1: To understand the basics of Operating Systems and its Components
CO2: To gain the knowledge of CPU scheduling and algorithms
CO3: To understand the concept of memory management techniques
CO4: To acquire the basic knowledge of file management system & directory structure

CO5: To acquire the basic knowledge of Deadlocks with the techniques of avoidance,

detection, prevention and recovery

Unit – I

Operating System Definitions, its Components, Evolution of Operating System, types of operating systems: batch, multiprogrammed, multitasking, desktop, multiprocessor, real-time, client-server, peer-to-peer, distributed, clustered and handheld. Operating system services, dual-mode operation, protection of I/O, memory and CPU. Non-virtual and virtual machines.

Unit – II

Process Scheduling: concept of a process, process states, PCB, Process state transitions, operations on processes, context switch, types of schedulers, CPU scheduling concept, CPU Scheduler, CPU-I/O burst cycle, dispatcher, scheduling criteria, scheduling algorithms – FCFS, SJF, STRN, Round Robin, priority, multilevel queue and event driven (i.e., pre-emptive priority) scheduling algorithms, Performance evaluation of algorithms through deterministic modeling.

Unit – III

Memory Management Concepts: Address Binding, logical and physical address space, dynamic loading etc., Contiguous allocation methods – static & dynamic partitioned memory allocation. Concepts of fragmentation, swapping, relocation, compaction, protection, sharing. Segmentation.
Non–contiguous allocation methods – Paging: basic principle of operation, h/w support for paging, protection and sharing. Virtual memory: concept of demand paging, Page fault, page replacement algorithms – FIFO, LRU, OPT. Thrashing, Concept of Page fault frequency, prepaging, decision about minimum number of frames, page size etc.,

Unit – IV

File system implementation, Responsibilities of file management system, directory implementation as linear list/hash table, directory structure, disk organization, disk controller and driver, disk space management – contiguous allocation, non contiguous allocation – chaining and indexing, disk address translation. Idea about disk caching, disk mirroring. Disk scheduling algorithms. Disk management.

Unit – V

Device Management: I/O hardware, Techniques for device management. Dedicated devices, shared devices, virtual peripherals. Security & protection: Security threats and goals, penetration attempts, Security policies and mechanism, authentication, protection and access control. Interprocess communication, need for interprocess synchronization. Deadlocks – definition, avoidance, detection, prevention and recovery.

Text Book:

1. Operating System Concepts – by Silberschatz, Galvin and Gagne.

Reference Books:

1. Operating System Concepts and Design – by Milenkovic
2. Operating System – by Tanenbaum.
3. Operating System – by Peterson.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
SCHEME
Fourth Semester

S.No	Subject Code	Subject Name	Marks Distribution						Total Marks
			Assignment Marks		Theory Marks		Practical Marks		
			Max	Min	Max	Min	Max	Min	
1	FC-401/1	English Language	10	4	40	14	-	-	50
2	FC-401/2	Development of Entrepreneurship	10	4	40	14	-	-	50
3	BC-402	Computer Oriented Numerical Methods	20	7	80	27	-	-	100
4	BC-403	System Analysis & Design	20	7	80	27	-	-	100
5	BC-404	Web Design	20	7	80	27	50	17	150
6	BC-405	Data Structure & Algorithms	20	7	80	27	50	17	150
			100	36	400	136	100	34	600

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./B.Com./B.Sc
Semester – IV

Course	Subject	Subject Code
B.C.A.	**English Language**	**FC-401/1**

COURSE OUTCOME

C 01: The course aims at exposing students to the examples of prose and poetry in English so that they realize the beauty and communicative power of English

C 02: Upon the completion of the course thr students will develop the ability to appreciate ideas and think critically

C 03: On successful completion of the Programme, the students will be accurate both in oral and written communication as they will be strong in Writing skills and its usage.

C 04: They can express a thorough command of English and its linguistic Structures.

Unit-I

1	William Wordsworth	:	‒The World is Too Much With Us‖
2.	K. Aludiapillai Information Decentralisation‖	:	‒Communication Education and Technology‖‒Democratic
3.	S. C. Dubey	:	‒Basic Quality of Life
4.	Sister Nivedita	:	‒The Judgment Seat of Vikramaditya‖
5.	Juliun Huxley	:	‒War as a Biological Phenomenon‖
6.	Robert Frost	:	‒Stopping by Woods on a Snowy Evening‖
7.	Ruskin Bond	:	‒The Cherry Tree‖

Unit-II

Short Essay of about 250-300 words.

Unit-III

Translation of a short passage from Hindi to English.

Unit-IV

Drafting CV, writing e-mail message for official purpose.

Unit-V

Language Skills, One-word substitution, homonyms, homophones, words that confuse, Punctuation, Idioms

Course	Subject	Subject Code
B.C.A.	**Development of Entrepreneurship**	**FC-401/2**

COURSE OUTCOME

C 01: The students develop and can systematically apply an entrepreneurial way of thinking that will allow them to identify and create business opportunities that may be commercialized successfully.

C 02: After the completion of the course, the students will be able to have the ability to discern distinct entrepreneurial traits

C 03: Know the parameters to assess opportunities and constraints for new business ideas

C 04: Understand the systematic process to select and screen a business idea and design strategies for successful implementation of ideas

C 05: The students will be able to write a business plan

Unit-I

Entrepreneurship - Meaning, Concept, Characteristics of entrepreneur.

Unit-II

Types of entrepreneurship, importance and views of various thinkers (Scholars).
- Formation of goals, How to achieve goals.
- Problems in achieving targets and solution.
- Self-motivation, elements of self-motivation and development.
- Views of various scholars, evaluation, solutions.
Leadership capacity: Its development and results.

Unit-III

Projects and various organizations (Govt., non-Govt.), Govt. Projects, Non-Govt. projects.
Contribution of Books, their limitations, scope.

Unit-IV

Functions, qualities, management of a good entrepreneur. Qualities of the entrepreneur (Modern and traditional). Management skills of the entrepreneur. Motive factors of the entrepreneur.

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./B.Com./B.Sc
Semester – IV

Unit-V

Problems and Scope of the Entrepreneur:
-       Problem of Capital
-       Problem of Power
-       Problem of registration
-       Administrative problems
-       Problems of Ownership.

ʊ

Course	Subject	Subject Code
B.C.A.	**Computer Oriented Numerical Methods**	**BC-402**

Course Outcomes:

CO1: To acquire the basic knowledge of Algebraic Equations with different method Newton-Raphson method, Regula-Falsi method and Successive Bisection method and its application

CO2: To acquire the basic knowledge of Interpolation & Extrapolation specially computation of missing value; and Bessel's Central difference formula

CO3: To acquire the basic knowledge of Integration & Differentiation and its application

CO4: To acquire the basic knowledge for the solution of ordinary differential & Integral Methods: Euler's, Picard's and Taylor's series methods.

CO5: To understand the meaning of Correlation, Regression and Lines of Regression with their application

Unit - I

Solutions of Algebraic, Transcendental & Simultaneous Algebraic Equations. Introduction to Algebraic & Transcendental Equations, Newton-Raphson method, Regula-Falsi method, Successive Bisection method, Secant method, Comparison of Regula-Falsi method with Bisection method, Gauss Elimination method, Gause-Seidal method, Gauss Jordan method, Concept of Pivoting.

Unit - II

Interpolation & Extrapolation: Newton's Interpolation formulae, Newton's forward difference & Backward difference formula, Lagrange's Interpolation formula, Newton's divided-difference interpolation, Sterling's and Bessel's Central difference formula.

Unit - III

Numerical Integration & Differentiation: Introduction, Newton's Cotes formulae, Trapezoidal rule, Simpson's rule, Weddle's rule.

Unit - IV

Solution of ordinary differential & Integral Methods: Euler's, Picard's and Taylor's series methods. Modified Euler method, Picard's method for successive approximation, method of successive differentiation, Runge-kutta second & forth order methods.

R.K.D.F. UNIVERSITY, BHOPAL

Unit - V

Correlation & Regression: Karl Pearson's Coefficient of Correlation, Rank Coefficient of Correlation, Partial & Multiple Correlation, Lines of Regression, Coefficient of Regression.

Text Books:

1. Computer Oriented Numerical Methods by Rajaraman.
2. Mathematical Statistics by Ray & Harswarup Sharma.
3. Numerical Analysis by Prahlad Tiwari.

References Books:

1. Method of Numerical Methods by Shastri.
2. Computer Based Numerical Algorithms by Krishnamurthy.
3. Computer Oriented Numerical Methods by Salvadori.
4. Numerical Methods by H C Agarwal.
5. Fundamentals of Mathematical Statistics by Gupta & Kapoor.

Bachelor of Computer Application (BCA)
Semester – IV

Course	Subject	Subject Code
B.C.A.	**System Analysis & Design**	**BC-403**

Course Outcomes:

CO1: To acquire the elementary knowledge of System Analysis & Design its type and
System Development Life Cycle

CO2: To acquire the elementary knowledge structured analysis and learn the Steps
for Feasibility Study and for making the Feasibility Report.

CO3: To acquire the elementary knowledge System Testing, Why Testing is necessary.

CO4: To acquire the elementary knowledge Software Maintenance and how to
reducing maintenance costs

CO5: To Gain the knowledge of System Security, Data Security, Threats that required
for Risk Analysis

Unit – I

Overview of System Analysis & Design Definition, Characteristics, System Concepts, Elements and Types. System Development Life Cycle Impetus for change, Steps involved in SDLC, People involved SDLC. Initial Investigation Background Analysis, Fact finding techniques, tools for Information gathering, types of interviews and questionnaires.

Unit – II

Structured Analysis Definition, tools for structured analysis. Feasibility Study Definition, Considerations Technical, Economic, Behavioral & Political, Steps in Feasibility Study, Feasibility Report. Cost Benefit Analysis (CBA) Categories Hardware, Personnel, Facility, Operating and Supply Costs, Proce dure for CBA Determination.

Unit – III

System Design-Definition, Process of Design, Structured Design, Elements of Functional Decomposition – Module, Connection and Coupling, HIPO and IPO Charts, Major development activities of Design stage Data Validation, Audit Trial. System Testing – Why Testing? Factors considered for testing, Test Data & Test Plan, Phases of Testing, Types of system tests.

Unit – IV

Quality Assurance – Definition, Goals in System Life Cycle, Levels of Quality Assurance, Testing. Implementation–Conversion, Stages of Conversion, Combating resistance to change, Post Implementation Review, Review Plan. Software Maintenance – Maintenance/Enhancement, Activities

of a Maintenance procedure, reducing maintenance costs

Unit – V

System Security – Data Security, Threats to System Security, Risk Analysis, Control Measures, System Audit, Protection Againts VIRUS. Hardware and Software Selection – Hardware/Software Suppliers, Procedure for Hardware/Software Selection, Major Phases in Selection. Types of Software, Attributes of Software, Criteria for Software Selection, Evaluation Process. Financial Consideration in Selection – Rental, Lease, Purchase Options.

Text Books:

1. System Analysis and Design • by Elias M Awad.
2. System Analysis & Design – by V K Jain, Dreamtech Press.
3. System Analysis & Design – by Theoroff.

Reference Books:

1. Computers Today – by Suresh K Basandra.
2. Modern System Analysis & Design by A Hoffer, F George, S Valaciah, Low price Edn. Pearson Education.
3. Information Technology & Computer Applications – by V.K. Kapoor, Sultan Chand & Sons, New Delhi.
4. Introduction to Systems Analysis and Design – by Lee.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – IV

Course	Subject	Subject Code
B.C.A.	**Web Design**	**BC-404**

Course Outcomes:

CO1: To acquire the elementary knowledge of Internet, URL and Web Server
CO2: To acquire the elementary knowledge for formatting the HTML documents layout
CO3: To understand the Advanced Layout: Tables, Frames, Layers and their attributes
CO4: To acquire the elementary knowledge of style sheet and its properties
CO5: To acquire the elementary knowledge DHTML, XML and Web publishing

Unit – I

Introduction to Internet & World Wide Web, Internet Addressing, Browsers, URL, Web Server, Web Site, Homepage, Domain Names Basic Concepts. Facilities available over the Internet – email, www, ftp, telnet, usenet, blog, faq, chat. Components of Internet – client/server modem, cable, modem, backbone, router, IP addresses, address classes, DNS names, subnet, UDP & TCP, Uses of Internet. Introduction to HTML overview, Structure of HTML documents, Types of Documents, HTML Elements and Attributes.

Unit – II

Basic Formatting of HTML documents layout – Font, Lists, Paragraph, Break Rule, Horizontal Rule, Colors, Backgrounds, text elements, <PRE>, etc. Links in html anchor element and its attributes, images and anchors, using META information. HTML Media Types – media like element <MARQUEE, Audio & Video support in web browsers.

Unit – III

Advanced Layout: Tables, Frames, Layers, Tables layout, elements and attributes, ROWSPAN, COLSPAN. Frames using frames, layout of frames, problems using frames. Layers-concept of layers, positioned and inflow layers.

Unit - IV

Style sheets – Basic concept of style sheet, using style sheet, cascading style sheets (css), using style sheets – basics and properties, positioning with style sheets, Basic Interactivity in html: Forms-Concept of Forms, <FORM> element, attributes, Controls used for forms, examples of form design.

Unit – V

Advanced Features in HTML: Scripting, DHTML & XML, Web publishing – Concepts. Scripting – purpose of scripting, specifying scripts & designing events. DHTML: Overview of DHTML and

R.K.D.F. UNIVERSITY, BHOPAL

Document object Model, html & scripting access, rollover buttons XML: Basic XML structure, ways to use XML, rewriting html as xml.

Text Books:
1. The Complete Reference to HTML – by Thomas A Powell, TMH, II Edition.
2. Using HTML – by Lee Anne Phillips, PHI

Reference Books:
1. Learning computer Fundamentals, MS Office & Internet & web technology by Dinesh Maidasani, Firewall Media.
2. Introductions to Internet & Java – by Kiran Nayar, Sukhjeet Kaur, Kalyani Publishers.

Bachelor of Computer Application (BCA)
Semester – IV

Course	Subject	Subject Code
B.C.A.	**Data Structure & Algorithms**	**BC-405**

Course Outcomes:

 CO1: To acquire the elementary knowledge of Data Structure, its types and utility of array

 CO2: To Gain the knowledge of Stack and learn the program of Queues & its application

CO3: To acquire the elementary knowledge of Linked list and Linked implementation of Stacks and queues

CO4: To understand the basic knowledge of binary tree and Insertion & Deletion algorithms with its utility

CO5: To acquire the elementary knowledge of Selection Sort, Bubble Sort method & its algorithm

Unit - I

Definition of Data Structure, its types, Basic operations in Data Structures. Array – its representation, Operations on arrays, address calculation of single and multi-dimensional arrays in memory, Applications of arrays.

Unit - II

Stack: Representation of Stacks, operations on Stacks, infix and postfix notations, postfix expression evaluation, application of Stacks. Queues: Representation of queues, operations on queues, circular queue, Dequeue, Priority Queue, Applications of queues.

Unit - III

Linked list: Single Linked List – description & operations, Doubly Linked List – description & operations, Linked implementation of Stacks and queues, Header linked list.

Unit - IV

Trees: Basic terminology, binary tree, binary search tree, Operations on binary tree: Insertion & Deletion algorithms. Traversal of binary trees: Inorder, Preorder & Post order.

R.K.D.F. UNIVERSITY, BHOPAL

Unit – V

Searching: Linear Search, Binary Search. Sorting: Selection Sort, Bubble Sort method & its algorithm, Quick Sort, Merge Sort. Graphs: Related Concepts and its representations. Graph Traversal Schemes: Depth first search, Breadth first search.

Text Books:
1. Data Structure by Schaum Series.
2. Data Structure by Tanenbaum.

Reference Book:
1. Data Structure by Sartaj Sahani.
2. Data Structure using C++ by Yashwant Kanetkar

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
SCHEME
Fifth Semester

S.No	Subject Code	Subject Name	Marks Distribution						Total Marks
			Assignment Marks		Theory Marks		Practical Marks		
			Max	Min	Max	Min	Max	Min	
1	FC-501/1	Values & Spirituality	10	4	40	14	-	-	50
2	FC-501/2	Basic Computer Information Technology-I	10	4	40	14	-	-	50
3	BC-502	Data Communication and Networking	20	7	80	27	50	17	100
4	BC-503	Visual Basic	20	7	80	27	50	17	100
5	BC-504	Marketing Management	20	7	80	27	-	-	100
6	BC-505	Management Information System	20	7	80	27	-	-	150
		Total	100	36	400	109	100	34	600

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./ B.Com./B.Sc
Semester – V

Course	Subject	Subject Code
B.C.A.	**Values & Spirituality**	**FC-501/1**

COURSE OUTCOME

C 01: The course aims to teach and inculcate the importance of value based living among students and give them a deeper understanding about the purpose of life.

C 02: Upon the completion of the course the students will understand the importance of value based living.

C 03: Students will understand and start applying the essential steps to become good leaders and emerge as responsible citizens with clear conviction to practice values and ethics in life.

C 04: Students will become value based professionals and will contribute in building a healthy nation.

Chapter 6: THE SUPREME- SOURCE OF VALUES

6.1   Objectives
6.2   Introduction
6.3   All about the Supreme
6.4   Name &Form of the Supreme
6.5   Abode of the Supreme
6.6   Attributes of the Supreme
6.7   Action of benediction
6.8   Auspicious confluence (Now or never)
6.9   Summary
6.10   Glossary
6.11   Suggested reading

Chapter 7 : HEALING RELATIONSHIPS WITH THE SUPREME

7.1   Objectives
7.2   Introduction
7.3   Significance of the relationships
7.4   All relations with ONE
7.5   major relations
7.6   True and eternal relations
7.7   Benefits of various relationships
7.8   The timeless dimensions
7.9   Summary
7.10   Glossary

Quiet reflection- Practice introversion-Being an observer-Stand back and observe -Self-awareness (Soul consciousness)-Experiencing Body free stage-Reflect on original qualities-Visualize the Divine-Think attributes of the Supreme-Developing a living relationship-Surrender to God-Create Good wishes for all-Visualization in Meditation: Orbs of Light- The forest-The Balloon

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./ B.Com./B.Sc

Semester – V

Course	Subject	Subject Code
B.C.A.	**Basic Computer Information Technology-I**	**FC-501/2**

Course Outcomes:

CO1: To acquire the elementary knowledge of the development of Computer system and its generation

CO2: To acquire the elementary knowledge of ALU, Input/ Output and kind of memory RAM, ROM, EPROM and PROM.

CO3: To gain the elementary knowledge of the memory management and its application

CO4: To understand the storage devices and its capacity of in term of storages

CO5: To acquire the elementary knowledge operating systems, it's functioning and types. Also learn the basic commands of dos & Windows operating System.

Unit – I

INTRODUCTION TO COMPUTER ORGANIZATION–I:- History of development of Computer system concepts. Characteristics, Capability and limitations. Generation of computer. Types of PC's Desktop. Laptop, Notebook. Workstation & their Characteristics.

Unit – II

INTRODUCTION TO COMPUTER ORGANIZATION–II:-Basic components of a computer system Control Unit, ALU. Input/ Output function and Characteristics, memory RAM, ROM, EPROM, PROM.

Unit – III

INPUT & OUTPUT DEVICES: Input Devices: Keyboard, Mouse, Trackball. Joystick, Digitizing tablet, Scanners, Digital Camera, MICR, OCR, OMR, Bar-code Reader, Voice Recognition, Light pen, Touch Screen. **Output Devices:** Monitors Characteristics and types of monitor, Video Standard VGA, SVGA, XGA, LCD Screen etc. Printer, Daisy wheel, Dot Matrix, Inkjet, Laser, Line Printer. Plotter, Sound Card and Speakers.

Unit – IV

STORAGE DEVICES:- Storage fundamental primary Vs Secondary. Various Storage Devices magnetic Tape. Cartridge Tape, Data Drives, Hard Drives, Floppy Disks, CD, VCD, CD-R, CD-RW, Zip Drive, DVD, DVD-RW.

INTRODUCTION TO OPERATING SYSTEM:- Introduction to operating systems, its functioning and types. basic commands of dos & Windows operating System.

Disk Operating System (DOS)
- Introduction, History and Versions of DOS.

DOS Basics
- Physical Structure of disk, Drive name, FAT, file & directory structure and naming rules, booting process, DOS system files.

Course	Subject	Subject Code
B.Com.	Basic Computer Information Technology-I	FC 501/2

DOS Commands
- Internal DIR, MD, CD, RD, Copy, DEL, REN, VOL, DATE, TIME, CLS, PATH, TYPE etc.
- External CHKDSK, SCOPE, PRINT DISKCOPY, DOSKEY, TREE, MOVE, LABEL, APPEND, FORMAT, SORT, FDISK, BACKUP, MODE, ATTRIB HELP, SYS etc.

PRACTICALS DOS:
- DOS commands: Internal & External Commands.
- Special batch file: Autoexec, Bar Hard disk setup.

Windows 98:
- Desktop setting: New folder, rename bin operation, briefcase, function. Control panel utility.
- Display properties: Screen saver, background settings.

Ms-Word:
- Creating file: save, save as HTML, Save as Text, template, RTF Format.
- Page setup utility: Margin settings, paper size setting, paper source, layout.
- Editing: Cut, paste special, undo, redo, find, replace, goto etc.
- View file: page layout, Normal Outline, master document, ruler header, footer, footnote, full screen.
- Insert: break, page number, symbol, date & time, auto text, caption file, object, hyperlink, picture etc.
- Format: font, paragraph, bullets & numbering, border & shading, change case, columns.
- Table: Draw label, insert table, cell handling, table auto format, sort formula.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – V

Course	Subject	Subject Code
B.C.A.	**Data Communication and Networking**	**BC-502**

Course Outcomes:

CO1: To acquire the basic knowledge of Networking and Network Topologies with Different Transmission Media

CO2: To Gain the elementary knowledge of OSI Reference Model and IEEE 802 standards

CO3: To acquire the knowledge of IP addressing MPLS and ATM applications

CO4: To acquire the knowledge of Cryptography and various Cryptography algorithms

Unit - I

Definition and concept of networking, evolution of Network Technology, Standards and protocol, Types of networking- LAN,WAN, MAN, features and Components of LAN,WAN, MAN with difference, Internetworking, Network Topologies, Different Transmission Media, Transmission Mode, Introduction to Analog signal, Digital signal, Modulation and Demodulation.

Unit-II

OSI Reference Model-Layered architecture, function of each layer, protocol used, Switching-message, packet, circuit, Multiplexing, SONET, Cellular network, satellite network, IEEE 802 STANDARDS- CSMA/CD, TOKAEN BUS, TOKEN RING, Physical components of network- Hub, Bridge, Repeaters, Gateway, Routers, Adapters, Routers.

Unit-III

TCP/IP- Overview, Architecture, functions of each layer and protocol, IP addressing, subnet and subnet mask, IP addressing-classes, IP,IPVV, Bootstrap protocol, DHCP, mobile IP, DNS, Telenet, Internet routing protocol.

Unit-IV

ATM network, BISDN reference model, ATM signaling, PNNI routing, classical IP over ATM, IP forwarding architecture, integrated services in internet, RSVP, differentiated services, network interconnection model, MPLS, ATM applications.

R.K.D.F. UNIVERSITY, BHOPAL

Bachelor of Computer Application (BCA)

Semester – V

Unit-V

Cryptography, Cryptography algorithms, security protocol, DATA security over LAN, Levels of security, Virus and worms related threats, nature of virus, malicious program, Introduction to Firewall, Wi-Fi, Bluetooth, Infrared.

Reference:-

Agrawalr/ Tiwaribb Data Communication and Computer Network, IE, Vikas
Forouzan Data Communication - TMG
Stallings Data and Computer Communication Pearson
Bhatia S.S, Sharma Yogesh, Computer Network and Data Communication KALYANI

R.K.D.F. UNIVERSITY, BHOPAL

Bachelor of Computer Application (BCA)

Semester – V

Course	Subject	Subject Code
B.C.A.	**Visual Basic**	**BC-503**

Course Outcomes:

CO1: To acquire the basic knowledge of Visual BASIC, VB Controls and Operators

CO2: To acquire the basic knowledge of   Msg Box, Input Box statement

CO3: To acquire the basic knowledge of   Data Handling – using Grids, Validation and filtering record set.

CO4: To acquire the basic knowledge of SQL and its Components of SQL, DDL, DML

CO5: To gain the knowledge of Data Constraints & Business rule constraints

Unit – I

Introduction to Visual BASIC, VB Environment- User Interface screen, Forms, Project Explorer, Properties, Code Window, VB Menu options, Tool Bar, adding components to tool bar. VB Controls: Text Box, Label, Frames, Option Buttons, Check Box, Line, Command Button, Image, Picture Box, Data Types, Variable declarations, Constants, Scope of Variables, VB files, Naming Conventions, Default property for each VB control. Operators – logical, relational, mathematical operators. Statements- simple, using while & until in Do-Loop structure.

Unit-II

Using Msg Box and Input Box statement and functions, Input Validation, Writing Events-adding & calling forms in a project, calling Event Procedures, Debugging VB Projects, using Common Dialog Box, Writing Procedures – subroutines & functions and its calling methods, using multiple forms, using standard code modules. Using An About Box and Splash Screen, using Sub Main for Startup, using List Boxes and Combo Boxes, creating and using Menus, using String Function, Control Arrays, Case Structure. Arrays – Single and Multi-dimensional arrays, User Defined Data Types.

Unit-III

Handling Data Files- Sequential file Organization, Trapping Program Errors, Sequential Data Files. Accessing Database files – Data Bound Control (DAO & ADO) objects, Navigating Database in Code, Updating database file, Preventing Errors. Advanced Data Handling – using Grids, Validation, setting a record set, repositioning the records, finding & filtering record set, using SQL in record set. Various methods of using SQL as Record source and changing at runtime. Date Report Designer – creating Data Environment and linking to Data Report.

R.K.D.F. UNIVERSITY, BHOPAL

Bachelor of Computer Application (BCA)

Semester – V

Unit-IV

Introduction to SQL: Components of SQL, DDL, DML, Query Language, DCL, TCL, SCL etc. Invoking sql*plus. The oracle data types two dimensional matrix creation. Insertion, updating, deletion operations, the many faces of select command, creating tables using query, inserting data using query, modifying the structure of tables, renaming tables, dropping tables, dropping columns, logical

operators, range searching, pattern matching, use of Alias, Oracle Functions. Accessing data from multiple tables. Set operations: Union, Intersect, Minus.

Unit-V

Data Constraints: I/O constraints, Business rule constraints. Grouping data from tables. Joins: Equi-join Self-join, Sub-Queries. Views, Sequences, Synonyms, use of save point, rollback & commit commands, creating user accounts, granting permissions, revoking permission.

References:-

Carnell - VB6 - From the Ground up - TMH
Deitel - VB 2005 - Hw to program - Reason
Stephons - VB 2008 Programmer's Reference - Wiley

Course	Subject	Subject Code
B.C.A.	**Marketing Management**	**BC-504**

Zok - VB 8 - Cengage

Course Outcomes:

CO1: To acquire the basic knowledge of marketing research and information system
CO2: To understand the Product management and the advertising management
CO3: To gain the knowledge of Marketing strategy and marketing performance of users

CO4: To Understand the Global marketing, customer service and rural marketing with some strategies

CO5: To learn Case studies in market management with its work plan.

Unit - I

Indian Markets:- Environment, Structure, Force and measurement: Introduction, market environment, market planning, marketing research and information system, Consumer behavior, organizational buying behavior, segmenting and targeting the market, market measurement and forecasting.

R.K.D.F. UNIVERSITY, BHOPAL

Bachelor of Computer Application (BCA)
Semester – V
Unit-II

Assembling marketing mix for Indian markets: Product management, new product decisions, brand equity, pricing decisions, promotion decision, advertising management, sales promotion, personal selling managing he sales force, managing the distribution function.

Unit-III

Marketing strategy, marketing organization, marketing performance and control.

Unit-IV

Global marketing, customer service, rural marketing.

Unit-V

Cases in marketing management.
Case1: The Indian Television industry.
Case2: Hi-end audio products.
Case3: Pepsi-Killing safely.
Case4: Hi-Tech system distributors Ltd.
Case5: New Inductance product for women market.
Case6: Market opportunity for automotive gears in India.
Case7: Zen Microgriptyres.
Case8: Marketing of milk-Amul.

Course	Subject	Subject Code
B.C.A.	**Management Information System**	**BC-505**

Course Outcomes:

CO1: To acquire the basic knowledge of hardware components and its application in problem solving

CO2: To develop the understanding of Geographic information system and Marketing, HRM

CO3: To acquire the basic knowledge of Decision Support System

CO4: To Gain the knowledge of Quality control and Quality assurance

Course Contents:

Unit - I

Introduction: Overview role of IT, MIS trends etc. Personal Productivity Overviews, introduction data hardware components, O/S, applications, Solving problems: System approach, OO design, operations and transaction, database management who should control corporate data.

Unit-II

Models and decision support biases Eis. Decision in Business Areas: Accounting. Finance, Marketing, HRM, Production & design, Geographic information system.

Unit-III

Complex decision and artificial intelligence: DSS

DECISION SUPPORT SYSTEM
Importance of Decision support system, limitation,
Characteristics of Decision Support Systems
Decision Support and Structure of Decisions Making
Decision Support and Repetitiveness of Decisions
Decision Support System Users

EXPERT SYSTEMS, SUPPORT FOR DECISION MAKING PHASES
Support for the Intelligence Phase, Support for the Design Phase
Support for the Choice Phase
Decision Support and Alternative Concepts of Decision Making

APPROACHES TO DEVELOPMENT OF DECISION SUPPORT SYSTEMS
Programming Language, Spreadsheet Processor
Analysis Package, Model Generator
Model Base Management

SUMMARY OF A PLANNING SUPPORT SYSTEM
Models and Facilities Used in Planning Support
Planning Software System
Database and Database Query Systems for Planning
Advantages of a Planning Support System

SUMMARY OF A CONTROL SUPPORT SYSTEM
And AI. Strategic analysis.

Unit-IV

Designing and maintaining information system, Organizing information system resource, information society and management.

Unit-V

Performance Evaluation and monitoring, Model building, simulation. Quality control and Quality assurance, Scheduling, pricing.

Reference:-
Bagchi Nirmalya Management Information System, Vikas
Jindal Aman, Management Information System KALYANI

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
SCHEME
Six Semester

S.No	Subject Code	Subject Name	Marks Distribution						Total Marks
			Assignment Marks		Theory Marks		Practical Marks		
			Max	Min	Max	Min	Max	Min	
1	FC-601/1	Hkk"kk dk'ky ,o O;fDrRo fodkl	10	4	40	14	-	-	50
2	FC-601/2	Basic Computer Information Technology-II	10	4	40	14	-	-	50
3	BC-602	Software Engineering	20	7	80	27	-	-	100
4	BC-603	Java	20	7	80	27	50	17	150
5	BC-604	Entrepreneurship	20	7	80	27	-	-	100
6	BC-605	Project	-	-	-	-	150	50	150
			80	29	320	109	200	67	600

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./B.Com./B.Sc
Semester – VI

Course	Subject	Subject Code
B.C.A	**Hkk"kk dkS'ky ,oa O;fDrRo fodkl**	**FC 601/1**

COURSE OUTCOME

C 01 : पाठ्यक्रम पूरा करने के बाद, एक शिक्षार्थी को हिंदी भाषा के बारे में एक उन्नत समझ होगी

C 02 : पाठ्यक्रम पूरा करने के बाद, लेख लिखने के साथ–साथ अधिग्रहण करने के लिए एक शिक्षार्थी, वक्तृत्व में और हिंदी भाषा में अध्ययन में निपुणता होगी

C 03: हिंदी विद्वानों को बढ़ावा देने के लिए और उन्हें प्रासंगिक लिखने और अनुवाद करने के लिए प्रोत्साहित करने के लिए

C 04: छात्रों को उनकी समृद्ध सांस्कृतिक, नैतिक, साहित्यिक और वैज्ञानिक विरासत और के लिए जागृत करना

bdkbZ &1

1-   Hkkjrh; laLÑfr
2-   Hkkjrh; lekt O;oLFkk
3-   lH;rk ,oa laLdkj
4-   oSf'od psruk
5-   leUo;hdj.k ¼Hkkjrh; ,oa varjkZ"Vªh; lanHkZ esa½

bdkbZ & 2

1-   /keZ
2-   U;k;
3-   n'kZu
4-   uhfr
5-   lkfgR;

bdkbZ & 3

1-   lapkj lalk/ku % lEidZ ds u, f{kfrt
2-   lekpkj i=
3-   Hkkjrh; izsl ifj"kn~
4-   jsfM;ksa
5-   nwjn'kZu

bdkbZ & 4

1-   flusek
2-   jaxeap
3-   laxhr
4-   fp=] ewfrZ] LFkkiR; dyk
5-   f'kYi dyk

bdkbZ & 5

1-   dEI;wVj
2-   nwjHkk"k % foKku dh lkSxkr
3-   ea= ¼dgkuh½ % izsepan
4-   ekr`Hkwfe ¼dfork½ % eSfFkyh'kj.k xqIr
6-   lkfgR;dkj dk nkf;Ro % MkW- izse Hkkjrh

lanHkZ iqLrd & e/;izns'k fgUnh xzaFk vdkneh] Hkksiky }kjk izdkf'kr iqLrd

R.K.D.F. UNIVERSITY, BHOPAL

B.C.A./B.A./B.Com./B.Sc
Semester – VI

Course	Subject	Subject Code
B.C.A.	**Basic Computer Information Technology-II**	**FC-601/2**

COURSE OUTCOME

C 01: After studying this course the students will understand the fundamental hardware components that make up a computer's hardware and the role of each of these components.

C 02: Have an understanding about the various programmes in Ms Office like Ms Word, Ms Powerpoint and Ms Excel.

C 03: Demonstrate a basic understanding of computer hardware and software.

C 04: Students will apply the computer concepts and skills learned to solve business problems

C 05: Students will understand the basic concepts and terminology related to computer technology

Course Contents:

Unit-I

Word Processing: Word
- Introduction to word Processing.
- MS Word: features, Creating, Saving and Operating Multi document windows, Editing Text selecting, Inserting, deleting moving text.
- Previewing documents, Printing document to file page. Reduce the number of pages by one.
- Formatting Documents: paragraph formats, aligning Text and Paragraph, Borders and shading, Headers and Footers, Multiple Columns.

Unit-II

Introduction to Excel
Excel & Worksheet:
- Worksheet basic.
- Creating worksheet, entering data into worksheet, heading information, data text, dates, alphanumeric, values, saving & quitting worksheet.
- Opening and moving around in an existing worksheet.
- Toolbars and Menus, keyboard shortcuts.
- Working with single and multiple workbook coping, renaming, moving, adding and deleting. coping entries and moving between workbooks.
- Working with formulas & cell referencing.
- Autosum.
- Coping formulas
- Absolute & Relative addressing.

Unit-III

Introduction to Power Point
- Features and various versions.
- Creating presentation using Slide master and template in various colour scheme.
- Working with slides make new slide move, copy, delete, duplicate, lay outing of slide, zoom in or out of a slide.
- Editing and formatting text: Alignment, editing, inserting, deleting, selecting, formatting of text, find and replace text.

Unit-IV

Power Point– II
- Bullets, footer, paragraph formatting, spell checking.
- Printing presentation Print slides, notes, handouts and outlines.
- Inserting objects Drawing and Inserting objects using Clip Arts picture and charts.
- Slide sorter, slide transition effect and animation effects. Presenting the show making stand alone presentation, Pack and go wizards.

Unit – V

Evolution, Protocol, concept, Internet, Dial-up connectivity, leased line, VSAT, Broad band, URLs, Domain names, Portals. E-mail, Pop & web based Email. Basic of sending and receiving Emails, Email & Internet Ethics, Computer virus, Antivirus software wage, Web Browsers.

Books Recommended-

Course	Subject	Subject Code
B.Com.	**Basic Computer Information Technology-I**	**FC 601/2**

Practical

Ms-Power Point:
Creating new slide, formatting slide layout, slide show & sorter, Inserting new slide, slide no., date, time, chart, formatting slide, tool operation.

List of suggested practical work:
- Under standing of a dial up connection through modern.
- Configuring a computer for an e-mail and using outlook Express or Netscape Messenger.
- Registration an e-mail address.
- Understanding of e-mail drafting.
- Understanding of address book maintenance for e-mail.
- Understanding of different mail program tools.
- Send and receive functions of e-mail.

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – VI

Course	Subject	Subject Code
B.C.A.	**Software Engineering**	**BC-602**

Course Outcomes:

CO1: To acquire the basic knowledge of Software Engineering problem and approach – phased at the time of development process

CO2: To Gain the knowledge of Software Specification and its Validation at the time of software development

CO3: To learn the Software Configuration management plans and risk management

CO4: To understand the Software Quality Assurance (SQA) with Software Reviews and Software Quality factors

Unit-I

The Software problem, Software Engineering problem, Software Engineering approach – phased development process, project management and matrices. Software processes–Processes, Projects, Components, Characteristics. Software Development process–process step specification, waterfall model, prototyping, iterative enhancement, spiral model.

Unit-II

Software Requirement Analysis and Specification–Software Requirements, Problem Analysis, Requirement Specification, Validation, Metrics.

Unit-III

Planning a Software project – Cost Estimation, Project Scheduling, Staffing and personnel planning, Software Configuration management plans, Quality Assurance plans, Project Monitoring Plans, Risk Management.

Unit-IV

Software Design– Design Principles, Module level concepts, Design Notation and Specification, Structured Design Methodology, Verification. Coding - Programming Practice, Verification and Metrics.

Unit- V

Software Testing–Testing fundamentals, Functional testing, Structural testing, Testing process. Software Quality Assurance (SQA): Software Reviews, Software Quality factors, SQA activities,

Formal Technical Reviews, SQA Approach. Software Configuration Management–Configuration Identification, Change Control, Status Accounting and Auditing.

References:-

Khurana Rohit Software Engineering, IE, Vikas
Pressonan – Software Engg.- MGH

R.K.D.F. UNIVERSITY, BHOPAL

Bachelor of Computer Application (BCA)

Semester – VI

Course	Subject	Subject Code
B.C.A.	**Java**	**BC-603**

Course Outcomes:

CO1: To acquire the basic knowledge of primitive data type-integer, Short, byte, float and double and its use in programming

CO2: To acquire the basic knowledge of array and also learn string and its application in program

CO3: To understand the initialization by constructors in JAVA

CO4: To Gain the knowledge of HTML Tags & Applets and its application in JAVA

Unit-I

Primitive data type-integer, Short, byte, float, double, Unicode character set, Boolean, their ranges default initial values, wrapping of integer arithmetic, casing comments identifiers and reserved words. Local variables operators, precedence, Examples and Exercises.

Unit-II

Statements Simple and compound, Uses of control do, for, while, switch, break case of continue label, class type Data; String, Arrays. Examples and Exercises.

Unit-III

Definition and naming conventions for the member of Java classes. Instances, fields and methods initialization by constructors. Creation of Objects, access methods. Example and Exercise.

Unit-IV

Inheritance, Super class, Subclass, Method overloading, Interface, Thread, Multithreading example, Synchronized, Exception (Try- Catch-Final blocks examples). Java Virtual Machine concepts, java platform overview, Programming examples to clarify use of objects, threads exception and Packages For I/O, file String handling. Examples and Exercise.

Unit-V

Local and Remote Applets Vs Applications, Writing Applets, Applets Life Cycle, Creating an Executable Applet, Designing a Web page, Applet Tag, Adding Applet to HTML file, Running the Applet, Passing Parameters to Applets, Aligning the Display, HTML Tags & Applets, Getting Input from the User.

Reference:-

Schildt java Complete Reference TMH
Das Rashmi kanta Core Java, IE, Vikas
Bansal Nitin, Ajit Kumar,A Simplified approach to Java
Programming , KALYANI

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – VI

Course	Subject	Subject Code
B.C.A.	**Entrepreneurship**	**BC-604**

Course Outcomes:

CO1: To acquire the basic knowledge of Entrepreneur and Role of enterprises in Economic Development.

CO2: To acquire the basic knowledge of various Steps in Project Formulation and Project Evaluation in Commercial and Legal Aspects

CO3: To gain the fundamental knowledge of Common Errors in Project Formulation

CO4: To acquire the basic knowledge of NSIC, SSIB, SSIDC & SISI

Course Contents:

Unit-I

Entrepreneur and Entrepreneurship : Concepts, Characteristics and functions of an Entrepreneur , Types of Entrepreneur, Major Entrepreneurial Competencies , Developing Competencies and Role of enterprises in Economic Development.

Unit-II

Project Identification and Formulation: Criteria for Selecting a particular Project, Scanning Of Business Environment and identifying Projects, Steps in Project Formulation and Project Evaluation (Organizational, Commercial and Legal Aspects).

Unit-III

Preparation of Business Plan / Project Report : Significance, Contents, Formulation, Planning Commission Guidelines for Formulating the Project report and Common Errors in Project Formulation.

Unit-IV

Institutional Finance to Entrepreneurs: commercial Banks, Financing Institutions (IDBI, IFCI, IRBI LIC, UTI, SFC, SIDC, SIDBI and EXIM Bank).

Unit-V

Institutional Support to Entrepreneurs: Needs, Support Institutions. Nation Small
Industry Corporation Ltd.(NSIC), Small Industries Development Organization(SIDO), Small Scale Industries Board(SSIB),State Small Industries Development Corporation(SSIDC), Small Industries Service Institutes(SISI),Direct Industries Centers(DICs), Industrial Estates, Specialized Institutes and Technical Consultancy Organizations(TCOs).

R.K.D.F. UNIVERSITY, BHOPAL
Bachelor of Computer Application (BCA)
Semester – VI

Reference Books:

1. S.S. Khanka, Entrepreneurial Development, New Delhi. S.Chand and Sons. 2nd Ed. 2000
2. Vasant Desai, Dynamics of Entrepreneurial Development and Management, Bombay, l•imalaya Publishing House, 4th Ed. 2000•
3. Entrepreneurship Development• Centre for Research and Industrial Staff Performance, New Delhi., Tata McGra•Hill,1998
4. Thomas W. Zimmerer and Norman M. Scarborough, Entrepreneurship and New Venture Formation, New Delhi. Prentice Hall of India, 1996
5. Hisrich, Entrepreneurship (Special Indian Edition), 6th Edition, McGraw•Hill Education.