Session- 2024-26

MASTER OF COMPUTER APPLICATIONS

BRIDGE COURSE FOR NON COMPUTER BACKGROUND STUDENTS

SCHEME OF TEACHING AND EXAMINATIONS

Subject Code	SUBJECTS	Teaching Load Per Week			Examination Marks							
					Max. Marks				Min. Marks			
		L	T	P	Th	Ses	Pr	Total	Th	Ses	Pr	Total
BCMCA101	Computer Fundamental	2	-	-	100	50	-	150	40	30	-	70
BCMCA102	Programming in "C"	2	-	-	100	50	-	150	40	30	-	70
BCMCA103	Practical Based on BCMCA102 & Office Automation	-	-	1x2	-	25	100	125	-	15	50	65
	TOTAL	4	-	2	200	125	100	425	80	75	50	205

NOTE :

1. Student has to clear bridge course examination before appearing in the examination of Fourth Semester of the course.
2. Bridge Course will be Non Credential.
3. Bridge course shall not be treated as a core subject and hence will not be counted for ATKT examination and also not be considered for deciding division.
4. Examination for bridge course shall be conducted along with ATKT examination also.

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BRIDGE COURSE : BCMCA101
Computer Fundamentals

Max Marks: 100 **Min Marks: 40**

NOTE: The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice. Only Simple calculator is allowed not scientific calculator.

Course Outcomes

- Bridge the fundamental concepts of computers with the present level of knowledge of the students.
- Student will come to know about different input and output devices.
- Understand the basics of digital computer along with different storage unit.
- Familiarize operating systems, programming languages, peripheral devices, networking, multimedia and internet
- Understand different types of software.

Syllabus

UNIT-I:

Introduction to Computers: Definition, Characteristics and capabilities of computer system: Speed, Accuracy, Reliability, Memory capability. Block Diagram of a Computer, Computer Hardware and Software, Different Types of Software. Types of Computers: Analog, Digital, Hybrid General and Special Purpose Computers. Generation of Computers.

UNIT-II:

Computer Organization: Input Devices: Keyboard, Card Readers. Scanning Devices – O.M.R., Character Readers, MICR and Smart Cards. Pointing Devices-Mouse, Light Pen. **Output Devices**: Printers, Plotters, **Central Processing Unit**: The Microprocessor, control unit, A.L.U., Main Memory, Random Access Memory, and Read Only Memory (ROM).

UNIT-III:

Operating System: Software-Types of Software, System software Vs. Application Software, Operating system and its types. Language Processors, Assembler, Compiler & Interpreter. Introduction of DOS: DOS, System Files. Internal and External DOS Commands.

UNIT-IV:

Office Automation: MS-Word: - Creating and editing word document, formatting documents, word art, graph, mail merge. **MS-Excel**: Introduction to spread sheet, formatting in cell and text, functions, creating chart and graph. **MS-PowerPoint**: creating presentation, working with slides, slide transition, animating object.

UNIT-V:

Computer Network: Introduction to Computer Network, Internet, Types of Computer Network, Commonly used Network devices like Router, Bridge, Switch, RJ45, RJ11, Ethernet. Firewall, WWW, Brief overview of Network Security.

Books Recommended

1. Computer Fundamentals : P.K Sinha BPB Pubications
2. Fundamental of Information Technology : Chetan Shrivastava_Kalyani Publishers
3. Fundamental of Computer : V.Rajaraman
4. Computer today : Sanders D.H

Session- 2024-26

BRIDGE COURSE : BCMCA102

Programming In 'C'

Max Marks: 100 **Min Marks: 40**

NOTE: The Question Paper setter is advised to prepare unit-wise question with the provision of internal choice. Only Simple calculator is allowed not scientific calculator.

Course Outcomes

- Student will understand the basic terminology used in computer programming and will be able to design programs involving decision structures, loops, functions and Arrays.
- Student will understand the different data structures and create/update basic data files.
- Skills - At the end of the course, a student will be able to :
  a) Analyse a simple programming problem specification.
  b) Design a high-level (programming language independent) solution to the problem using functional abstraction and general imperative programming language constructs. Write, compile, execute and debug a C program which maps the high-level design onto concrete C programming constructs

Syllabus

UNIT – I : Overview of C :

History of C, Importance of C, Data types, Operators and Expressions, Basic Structure of C Programs, Keywords and Identifiers.

UNIT – II : Decision Making and Looping :

Control Structure: Simple if Statement, The if...else Statement, Nesting of if...else Statements, The Else if Ladder, Loops: The while Statement, The for Statement, The do Statement, Break and Continue Statement, Switch Statement, The goto Statement.

UNIT – III : Pointes and Functions :

Introduction to Pointers, Accessing the address of a Variable, Declaring Pointer Variables, Void Pointer, User-defined Functions: Function Calls, Call by Value, Call by Reference, Recursive Function.

UNIT – IV : Arrays :

Introduction to an Array: Types of Arrays, One-dimensional Arrays, Two-dimensional Arrays, Multi-dimensional Arrays, passing Arrays to Functions.

UNIT – V : Structure and Union :

Defining a Structure, Declaring Structure Variables, Accessing Structure Members, Structure initialization, Arrays of Structure. Defining a Union: Difference between Union and Structure, Operations on Union, Scope of Union.

Books Recommended

1. Programming in C - E. Balaguruswamy
2. Let us C - Yashwant Kanetkar.

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BRIDGE COURSE : BCMCA103

Practical Based on BCMCA102 & Office Automation

1. Programs based on C.
2. Practicals based on MS-Word, MS-Excel, MS-PowerPoint.

Department Name School of Studies in Computer science and IT
Course Choice Based Course II Semester
Paper Name COMPUTER NETWORKING & HTML
Total Credit: 03 **Total Marks: 100 (80 Theory + 20 Internal)**
Minimum Theory Marks : 16

COMPUTER NETWORKING & HTML

Course Outcome

Networking Concept: Basics of Computer networks: Communication process, Communication media, network topologies, Types of network (LAN, WAN, MAN), Modem, Ethernet, Bridge, Switch, Hub and Routers. Internet: Basic Internet Terminologies. Client server computing, Distributed Computing, Domain naming system, DNS Server, Internet Security, Internet Applications. Architecture of Internet, Client server model, web browser , www, Email, E-commerce and E-business.

The OSI Model- The model-Layered architecture, functions of the layers- Physical layer, Data Link layer, Network layer, Transport layer, session layer, Presentation layer, Application layer; the TCP/IP reference model, comparison of TCP/IP & OSI, Novell Netware, Arpanet, NSFNET.

Transmission of Digital Data- Analog and Digital, digital data transmission- parallel transmission, serial transmission, DTE-DCE interface data terminal equipment, data circuit terminating equipment, standards, modems-Transmission rate, Modem standards.

HTML- What is HTML, HTML documents/files. HTML Editor, explanation of the structure of home page, elements in HTML document, HTML elements, HTML tags and basic HTML tags, viewing the source of webpage. Downloading the Web Pages source Image, internal and external linking between web pages– IMG elements, Designing webpage, working with views, Hyperlinks, setting Hyperlink, using List, themes, tables, Frames, style sheet, working with forms, anchor, working with banners, Introducing web page, website, webspace, How to publishing web pages in local area network.

BOOKS RECOMMENDED:

1. Introduction to Data Communication & Networking : Behrouz & Forouzan
2. Web Publishing : Monika D'souza & Jude D'souza
3. Computer Network : A. S. Tanenbaum
4. Complete Reference HTML

Department Name School of Studies in Computer science and IT
Course Choice Based Course III Semester
Paper Name ESSENTIAL OF INFORMATION TECHNOLOGY
Total Credit: 03 **Total Marks: 100 (80 Theory + 20 Internal)**
Minimum Theory Marks : 16

ESSENTIAL OF INFORMATION TECHNOLOGY

Course Outcome

Introduction to Computers: Definition, Characteristics and capabilities of computer system: Speed, Accuracy, Reliability, Memory capability. Block Diagram of a Computer, Computer Hardware and Software, Different Types of Software. Types of Computers: Analog, Digital, Hybrid General and Special Purpose Computers. Generation of Computers.

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BOOKS RECOMMENDED:

1. Using IT : Williams, TMH
2. Computer Fundamentals : B. Ram, New Age International (P) Ltd
3. Fundamental of Information Technology : Chetan Shrivastava_Kalyani Publishers
4 Computer Fundamentals : P.K Sinha, BPB Pubications