SYLLABUS OF

Bachelor of Computer Application
B. C. A. Part - II

सत्र – 2005–06

:: GURU GHASIDAS UNIVERSITY, BILASPUR C.G. ::

COURSE STRUCTURE OF

BACHELOR OF COMPUTER APPLICATIONS

B.C.A. - II

Session - 2005-06

	Course Nomenclature	Max Marks	Min Marks
	THEORY		
1	Hindi Language	75	25
2	English language	75	25
3	Programming Concepts & Languages	100	33
4	Computer Architecture	100	33
5	Numerical Methads for Computer Application	100	33
6	Computer basad information System	100	33
7	Systems Analysis and Dasign	100	33
	PRACTICAL & PROJECT WORK		
8	Assignments	75	25
9	Practical & Viva voce	75	25

बी.ए./बी.एस.–सी/ बी. काम./ बी.एच.एस.–सी.

भाग – दो, आधार पाठ्यक्रम

प्रश्न पत्र – प्रथम (हिन्दी भाषा)

पूर्णांक – 75

खण्ड – क अंक – 30

निम्नलिखित 5 लेखकों के एक एक निबन्ध पाठ्यक्रम में सम्मिलित होंगे –

1.	महात्मा गांधी	–	सत्य और अहिंसा
2.	विनोबा भावे	–	ग्राम सेवा
3.	आचार्य नरेन्द्र देव	–	युवकों का समाज में स्थान
4.	वासुदेवशरण अग्रवाल	–	मातृ – भूमि
5.	भगवतशरण उपाध्याय	–	हिमालय की व्युत्पत्ति
6.	हंरि ठाकुर	–	डॉ. खूबचंद बघेल

खण्ड – ख अंक – 20

हिन्दी भाषा और उसके विविध रूप

- कार्यालयीन भाषा
- मीडिया की भाषा
- वित्त एवं वाणिज्य की भाषा
- मशीनी भाषा

खण्ड – ग अंक – 25

अनुवाद व्यवहार : अंग्रेजी से हिन्दी में अनुवाद

हिन्दी की व्यवहारिक कोटियाँ –

रचनागत प्रयोगगत उदाहरण, संज्ञा, सर्वनाम, विशेषण, क्रिया विशेषण, समास, संधि एवं संधियाँ, रचना एवं प्रयोगगत विवेचन।

B.C.A./B.A./ B.Sc./ B. COM./B.H.Sc.

PART - II

ENGLISH LANGUAGE

Paper - II M.M. 75

The question paper for B.C.A./B.A./ B.Sc./ B.Com/ B.H.Sc. English Language and cultural Valuers shall comprise the following units.

Unit - I	: Short answer question of about 400 words.	15 Marks
Unit - II	: (a) Rending comprehension of an unseen passage	05 Marks
	(b) Vocabulry	10 Marks
Unit - III	: Report - Writing (about 200 words)	15 Marks
Unit - IV	: Expansion of an idea (about 200 words)	15 Marks
Unit - V	: Grammar (Twenty items based on the patterns given in the prescribed text book to be asked and 15 to be attempted)	15 Marks

Note :- Question on all the units shall asked form the preseribed text which will comprise specimens of popular creative / writing and the following it any.

(a) Matter & Technology

(i) State of matter and its structure

(ii) Technology (Electronies Communication, Space Science)

(b) Our Scientists & Institution

(i) Life & work of our eminent scientist Arya Bhatt. Kaurd Charak shusruta, Nagarjuna J.C. Bose and C. V. Raman, S.Ramanujam, Homi J. Bagha Birbal Sahani.

(ii) Indian Scientific Institutions (Ancient & Modern)

A-1346

PROGRAMMING CONCEPTS & LANGUAGES

PAPER - III

M.M. 100

UNIT - I

PROGRAMMING CONCEPTS

Steps in Programming, Desirable Programme Concepts, Algoriothm Development and Efficiancy, Scarching Techniques (sequential/binary), Soming Techniques (bubble, exchange insertion).

UNIT - II

PROGRAMMING TOOLS

Flow Chart/Execution Charts, Psuedo-Codes, Decision Tuble, Top Down Structured Programming.

UNIT - III

DATA STRUCTURES

Amays, Lists, Stocks and Queues, Graphs

UNIT - IV

PROGRAMMING IN COBOL

Concepts of Cobol Programming, Division in Cobol, Basic Cobol Operations, Advanced Logic & Table Handling Routines

UNIT - V

PROGRAMMING IN 'C'

Basic 'C' syntax, Data Types in 'C' Operator and Expressions in 'C' Control structured, Pointers and Arraway Functions

A-1347

PAPER - IV

COMPUTER ARCHITECTURE

M.M. 100

UNIT - I

DIGITAL LOGIC AND COMPONENTS

Advanced Digital Logic Circuits, Advanced Digital Components, Data Representation.

UNIT - II

MICRO PROGRAMING LEVEL ANDMICRO OPERATIONS

Register Transfer & Micro Operations, Basic Computer Organisation & Design, Programming the Basic Computer, Micro Programmed Control.

UNIT - III

CPU AND PARALLEL PROCESSING TECHNIQUES

Details of CPU, Pipeline and Vector Processing, RISC Vs CISC Instroction Sets.

UNIT - IV

I/O AND MEMORY ORGANISATION

Input/Output Organisation, Memory Transition, Coche Memory Multiprocessing.

PAPER - V
NUMERICAL METHODS FOR COMPUTER APPLICATION

M.M. 100

UNIT - I

BASIC MATHEMATICS

Functions and Progression's Matrix Algebra , Basic Calculus

UNIT - II

POLYNOMIAL INTERPOLATION

le Grange and Newtan's Interpolation, Hermite Interpolation, Cubic spline Inerpolation, Error Analysis,

UNIT -III

SOLUTION OF ALGEBRAIC / TRANCENDENTAL EQUATIONS

Bisection Method, Graphical Mathods Regula Falsi, Integration, Newton, Raphson Methods, Bairstow, Graffe 's Root square Methods, Nearly Equal Roots Method.

UNIT -IV

NON -LINEAR NUMERICAL METHODS

Taylor series Method, Range-Kulta Metnod, Multisteps Method / stability & convergence, Two -Point Boundary Value Problems.

UNIT -V

CURVE FITTING AND PRINCIPLE OF LEAST SQUARES

Curve FittingMathods, Method of least squares, Fitting straight lines and second degree Parbola, Selection of type curveto be fitted.

PAPER -VI
COMPUTER BASED INFORMATION SYSTEM

M.M. 100

UNIT - I

ORGANISATION OF INFORMATION SYSTEM

Needofis and Organisation, Interplay of Is and Organisation Management lavelsand Appropriate into systems.

UNIT - II

OFFICE AUTOMATION SYSTEMS (OAS)

Elements of office Automaqtion systems, Group Support systems, Building an Automated office.

UNIT- III

TRANSACTION PROCESSING SYSTEMS (TPS)

Payroll and Billing Activitres, OLTP Concepts, OLTP Applications

UNIT- IV

MANAGEMENT INFORMATION SYSTEMS (MIS)

Definition and charactaristics, MIS and Organisation, Reporting Copabilities, Functional use of MIS.

UNIT-IV

EXPERT SYSTEMS (ES)

Basic Concepts of Artificial Intellignce, Anatomy of Expert System, Applications of ES.

PAPER -VII

SYSTEM ANALYSIS AND DESIGN

M.M. 100

UNIT - I

SYSTEM CONCEPTS AND LIFE CYCLE

Bisic systems Concepts, System Development Life Cycle, Role of System Analyst.

UNIT - II

SYSTEMS PROJECT SELECTION AND FEASIBILITY

Prioritazion of System development. Feasibility Analysis, Cost Benefit Analysis, Project Scheduling and Management.

UNIT- III

SYSTEMS ANALYSIS

Fact-Finding Techniques, Tool - kit for structured Analysis, System requirement specification, outline of System Analysis Report.

UNIT- IV

SYSTEM DESIGN

Materialization and Module Specification, Logic Design, File Design, I / O Form Design, Using Case Tools.

UNIT- V

SYSTEMS DEVELOPMENT AND IMPLEMENTATION

System Proto Typing, System Testing and Debugging, System Documentation, System Control and Reliability, System Implementation and Maintenance.

PAPER -VIII

ASSIGNMENTS

M.M. 75

Assignments on all Theory Paper.

PAPER -IX

PRACTICAL & VIVA VOCE

M.M. 75

Depending on Theory courses.

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COURSE STRUCTURE OF

BACHELOR OF COMPUTER APPLICATIONS

B.C.A. - III

Session - 2005-06

Course	Nomenclature	Max Marks	MinMarks
	THEORY		
1.	F.C. I -Hindi Language	75	25
2.	F.C. II -English language	75	25
3.	Database Management Systems & Distributions Processing.	100	33
4.	Computer Communications & Internet App.	100	33
5.	Object Oriented Programming with C++	100	33
6.	Management of Computer Systems	100	33
7.	Computer Aided Design/Manafacturing	100	33
	PRACTICAL & PROJECT WORK		
8.	Assignments	75	25
9.	Practical & Viva vace	75	25

15

A - 1351

आधार पाठ्यक्रम

तृतीय वर्ष

प्रश्न पत्र – प्रथम (हिन्दी भाषा)

पूर्णांक – 75

(बी.ए., बी.एस–सी., बी.एच.एस–सी., बी.काम. तृतीय वर्ष के पुनरीक्षित एकीकृत आधार पाठ्यक्रम एवं पाठ्य सामग्री का संयोजन 2000–2001 से लागू)

//सम्प्रेषण कौशल, हिन्दी भाषा और सामान्य ज्ञान//

आधार पाठ्यक्रम की संरचना और अनिवार्य पाठ्यपुस्तक–हिन्दी भाषा एवं समसामयिकी का संयोजन इस तरह किया गया है कि सामान्य ज्ञान की विषय वस्तु विकासशील देशों की समस्याओं के माध्यम, आधार और साथ–साथ हिन्दी भाषा का ज्ञान और उसमें सम्प्रेषण कौशल अर्जित किया जा सके। इसी प्रयोजन से व्याकरण की अन्तर्वस्तु को विविध विधाओं को संकलित रचनाओं और सामान्य ज्ञान की पाठ्य सामग्री के साथ अन्तर्गुम्फित किया गया है। अध्ययन–अध्यापन के लिए पूरी पुस्तक की पाठ्य सामग्री और अभ्यास के लिये विस्तृत प्रश्नावली है। यह प्रश्न पत्र भाषा का है अतः पाठ्य सामग्री का व्याख्यात्मक या आलोचनात्मक अध्ययन अपेक्षित नहीं है। पाठ्यक्रम और पाठ्यसामग्री का संयोजन निम्नलिखित पांच इकाइयों में किया जाता है। प्रत्येक इकाई दो भागों में विभक्त होगी :–

इकाई – एक (क) भारतमाता : सुभित्रानन्दन पंत, परशुराम की प्रतिज्ञाः रामधारी सिंह दिनकर, बहुत बडा सवालः मोहन राकेश, संस्कृति और राष्ट्रीय एकीकरणः योगेश अटल।

(ख) कथन की शैलियाँ : रचनागत उदाहरण और प्रयोग।

इकाई – दो (क) विकासशील देशों की समस्यायें, विकासात्मक पुनर्विचार और प्रौद्योगिकी एवं नगरीकरण।

(ख) विभिन्न संरचनाएं

इकाई – तीन (क) आधुनिक तकनीकी सभ्यता, पर्यावरण प्रदूषण तथा धारणीय विकास।

(ख) कार्यालयीन पत्र और आलेख

इकाई – चार (क) जनसंख्याः भारत के संदर्भ में और गरीबी तथा बेरोगजारी

(ख) अनुवाद

इकाई – पांच (क) ऊर्जा और शक्तिमानता का अर्थशास्त्र

(ख) घटनाओं, समारोहों आदि का प्रतिवेदन और विभिन्न प्रकार के निमंत्रण पत्र।

मूल्यांकन योजना :– प्रत्येक इकाई से एक–एक प्रश्न पूछा जायेगा। प्रत्येक प्रश्न में आंतरिक विकल्प होगा। प्रत्येक प्रश्न के 15 अंक होंगे। प्रत्येक इकाई दो–दो खंडों (क्रमशः क और ख में) विभक्त है, इसलिए प्रत्येक प्रश्न के भी दो भाग, (क्रमशः क और ख) होंगे। क अर्थात पाठ एवं सामान्य ज्ञान से संबंद्ध प्रश्न के अंक 8 एवं ख अर्थात भाषा एवं सम्प्रेषण कौशल संबंद्ध प्रश्न के अंक 7 होंगे। इस प्रकार दोनों प्रश्न पत्र के पूर्णांक 75 होंगे।

Foundation Course - English Language

B.C.A/B.A./B.Sc./B.Com./B.H.Sc. III

PAPER -II

Mark - 75

A - 1352

The Questions pater for B.A./B.Sc./B.Com./B.H.Sc. III Foundations Course, English Language and General Awareness shall comprise the following items :

Unit - I	:	Essay type answer in about 200 words. Four essay types question to be asked and two to be .....
Unit - II	:	Writing skills for compedition- Essay writing.
Unit - III	:	Procis writing
Unit - IV	:	Reading Conprobension of an unseen pasage 10 Marks (B) Vecabulary based ontext 05 Marks
Unit - V	:	Grammer Advanced Excerciscs.

Note :- Questions on unit I and IV (b) shall be asked from the prescribed text. Which will conprise of popular creat writing and the following items :

Minimum reeds-Housing and transport, Goo-econamic profile of M.P. women and Empowerment management of change. Physical quality of life, war and human servival, The question of human social value.

Survivel, the question of human social value, new Economic philosophy (Recent Liberralisation Methods) Democratic decentralisetion (with reference to 73, 74 consticucional/ mevement).

The text book shell be sponserxi by the M.P. Higher Education Edpartment and published the M.P. Hindi Crenth Academy.

DATA BASE MANAGEMENT SYSTEMS AND DISTRIBUTED PROCESSING

PAPER - III M.M. 100

Blocks	Units	Topics
I		DATABASE CONCEPTS
	1	Definition concepts and developments
	2	Need for Database
	3	Uses of Database
	4	Design of Database
II		DATABASE MANAGEMENT SYSTEM (DBMS)
	5	Concepts and classification
	6.	Logical Data Structure
	7.	Elements of DBMS
III		RELATIONAL DATABASE MANAGEMENT SYSTEM (R-DBNS)
	8.	Evoluation of comparative packages
	9.	Application of RDBMS/SQL
	10	DBMS for personal conputers
IV		DISTRIBUTED DATABASE SYSTEMS
	11.	Companents of DDB System
	12.	Client/server Archietecture
	13.	Applications of DDB
V		DATABASE SECURITY
	14	Concepts
	15.	Authorisation
	16	Access Controls
	17.	Enforcement

17

COMPUTER COMMUNICATIONS AND INTERNET APPLICATION

PAPER - IV M.M. 100

Blocks	Units	Topics
I		FUNDAMENTALS OF DATA COMMUNCATIONS
	1.	Date, Signals, Types of Signals
	2.	Transmission, Types and Media
	3.	Communication Codes
	4.	Communication Modes
	5.	Communcation Protocals
II		COMPUTER NET-WORKS
	6.	Classification of Networks
	7.	Network Topologies
	8.	ISO-Seven Layer Reference Model
	9.	Communication, Switching Techniques
	10.	TCP/IP Protocal Suites
III		LOCAL AREA NETWORKS (LAN)
	11.	LAN Characterisations
	12.	LAN Topologies
	13.	LAN Standards
	14.	Selection Criteria for LAN
IV		WIDE AREA NETWORKS (WAN)
	15.	Internet Works
	16.	Public Pocket Switched Data Network (PPSDN)
	17.	Integrated Serious Digital Networks (ISDN)
	18.	Wide Area Networks in India

V	INTERNET APPLICATIONS	
	19.	Internet Bolck of Networks
	20.	Internet Protocol
	21.	World Wide Web and It's Applications
	22.	HTML and Java

OBJECT ORINTED PROGRAMMING WITH C++

PAPER - V M.M. 100

Blocks	Units	Topics
I		CONCEPTS OF OBJECT ORIENTED PROGRAMMING
	1.	Objects and their Meaning
	2.	Classes
	3.	Class Relationships
	4.	Object Model to Solve Proflems
II.		BASICCONCEPTS OF C++ LANGUAGE
	5.	Takens, Openations, Expressions and Statements
	6.	Conditions and Control Statements
	7.	Indentifier Syntax
III.		A DVANCE FEATURS OF C++ LANGUAGE
	8.	Desing Issues
	9.	Arrays
	10.	Lists
	11.	Templates
IV		MORE FEATURES OF C++ LANGUAGE
	12.	Handiing Input/output
	13.	Constansts, Strings, Wropping
	14.	Error Handling
	19	Minimum Booleon Expressions
	20.	Karanaugh Maps

MANGEMANT OF COMPUTER SYSTEMS

PAPER - VI M.M. 100

Blocks	Units	Topics
I		MANAGING COMPUTER FUNCTION
	1.	Successful Inplementation of Is function
	2.	Managing computer professionals
	3.	Role of CIO
	4.	System Administration and Training
II		PLANNING FOR COMPUTER SYSTEMS
	5.	Specifocation of Requirements/Needs Analysis
	6.	System Study and configuration
III		SLECSTIO9N AND PROCUREMENT OF COMPUTER SYSTEM
	7.	Invitation to Tender
	8.	Stolations and Tender
	9.	Selections and Ordering
	10.	Sellvery and Instalation
IV		COMPUTER MANAGEMENT
	11	Hummr Aspect (Erganamics/Radiation)
	12.	Physical Aspects (Layout /Construction /Furniture)
	13.	Electrical, Air-Conditioning, cabling Aspects.
V		INTELLECTUAL PROPERTY ISSUES
	14.	Hard-Saftware Piracy
	15.	Conative Rights & Security of Networks
	16.	Product Liability and computer Systems

~~1376~~ A-1357

COMPUTER AIDED DESIGN/MANUFACURING

~~B3376~~ (CAD/CAM)

PAPER -VII ~~AK-3251~~ ~~AL-6447~~ M.M. 100

Blocks	Units	Topics
I		COMPUTER FUNDATION OF CAD/CAM
	1.	Computer Technology
	2.	Mini/Cicro Computers & Programiable controllers
II		COMPUTER AIDED DESIGN
	3.	Fundamentals of CAD
	4.	Hardware required for CAD
	5.	Computer Graphics Software and Database
III		NUMERICAL CONTROL-BEGINNING OF CAM
	6.	Conventional Numerical control
	7.	NC past Programming
	8.	Computer Controls in NC
IV		GROUP TECHNOLOGY AND PROCESS PLANNING
	9.	Group Technology
	10.	Computer
V		COMPUTER INTEGRADED PRODUCTION MANAGEMENT SYSTEMS.
	11	Production Planning Control
	12.	Inventory Management and MRP
	13.	Shop floor Control and plocess Manitaning
	14.	Essentials of REP

PAPER -VIII

M.M. 75

ASSIGNMENTS

Assignments all Theory Papers.

PAPER-IX

M.M. 75

PROJECT/PRACTICAL & VIVA VOCE

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