

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 Methods for Computer Application	100	33
6. Computer based information System	100	33
7. Systems Analysis and Design	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.

A-1344 भाग - दो, आधार पाठ्यक्रम
प्रश्न पत्र - प्रथम (हिन्दी भाषा)खण्ड - क ~~AK-3438~~ ~~AM-1401~~ पूर्णांक - 75
~~AL-6434~~ ~~4363~~ 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. हरि 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 संधिसिद्धि, रचना एवं प्रयोगगत विवेचन।

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

A-1345 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) Reading comprehension of an unseen passage 05 Marks
(b) Vocabulary 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 15 Marks
given in the prescribed text book to be asked and 15 to be attempted)

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

- (a) Matter & Technology
(i) State of matter and its structure
(ii) Technology (Electronics 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

~~AM-1403~~

PROGRAMMING CONCEPTS & LANGUAGES
PAPER - III

M.M. 100

~~8385~~
~~AK-3440~~
~~4365~~

~~AL-6436~~

UNIT - I

PROGRAMMING CONCEPTS

Steps in Programming, Desirable Programme Concepts, Algorithm Development and Efficiency, Searching Techniques (sequential/binary), Sorting Techniques (bubble, exchange insertion).

UNIT - II

PROGRAMMING TOOLS

Flow Chart/Execution Charts, Pseudo-Codes, Decision Table, Top Down Structured Programming.

UNIT - III

DATA STRUCTURES

Arrays, Lists, Stacks 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 structures, Pointers and Array Functions

A-1347

~~AL-6436~~

PAPER - IV

COMPUTER ARCHITECTURE

M.M. 100

~~8386~~
~~AK-3441~~

~~AM-1404~~~~4366~~

UNIT - I

DIGITAL LOGIC AND COMPONENTS

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

UNIT - II

MICRO PROGRAMING LEVEL AND MICRO 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 Instruction Sets.

UNIT - IV

I/O AND MEMORY ORGANISATION

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

A-1348

~~AL-6438~~

B.C.A., PART - I, II, III

PAPER - V

~~4367~~ NUMERICAL METHODS FOR
COMPUTER APPLICATION
~~AK-3442~~~~AM-1405~~~~8387~~

M.M. 100

UNIT - I

BASIC MATHEMATICS

Functions and Progression's Matrix Algebra, Basic Calculus

UNIT - II

POLYNOMIAL INTERPOLATION

le Grange and Newton's Interpolation, Hermite Interpolation, Cubic spline Interpolation, Error Analysis.

UNIT - III

SOLUTION OF ALGEBRAIC / TRANCENDENTAL EQUATIONS

Bisection Method, Graphical Methods, 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 Method, Multisteps Method / stability & convergence, Two -Point Boundary Value Problems.

UNIT - V

CURVE FITTING AND PRINCIPLE OF LEAST SQUARES

Curve Fitting Methods, Method of least squares, Fitting straight lines and second degree Parbola. Selection of type curve to be fitted.

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B.C.A., PART - I, II, III

A-1349

~~AL-6439~~

PAPER - VI

~~4368~~~~8388~~

COMPUTER BASED INFORMATION SYSTEM

~~AK-3443~~

M.M. 100

UNIT - I

~~AM-1406~~

ORGANISATION OF INFORMATION SYSTEM

Needofis and Organisation, Interplay of Is and Organisation
Management lavel sand 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 characteristics, MIS and Organisation,
Reporting Copabilities, Functional use of MIS.

UNIT - IV

EXPERT SYSTEMS (ES)

Basic Concepts of Artificial-Intelligence, Anatomy of Expert
System, Applications of ES.

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~~4369~~

PAPER -VII

~~8387~~

SYSTEM ANALYSIS AND DESIGN

~~AK-3444~~~~AI-6440~~

M.M. 100

UNIT - I

SYSTEM CONCEPTS AND LIFE CYCLE

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

UNIT - II

SYSTEMS PROJECT SELECTION AND FEASIBILITY

Prioritization 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

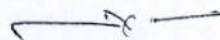
SYSTEM DESIGN

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.