ANDHRA PRADESH STATE COUNCIL OF HIGHER EDUCATION
(A Statutory body of the Government of Andhra Pradesh)

CBCS – UG SYLLABUS SUBJECT REVIEW COMMITTEE
(w.e.f. 2020-21 Admitted Batch)
PROGRAMME: Three-Year BA/BCom(Computer Applications)

Domain Subject: Commerce (Computer Applications)
(Syllabus with Outcomes, Co-curricular Activities, Referencesfor Fifteen Courses of 1, 2, 3 & 4 Semesters)

Structure of BA/B.Com (Computer Applications)Programme under Revised CBCS

Sl. No	Code	Sem	Courses	Name of Course (Each Course consists 5 Units with each Unit having 12 hours of class-work)	Hours/ Week	Credits	Marks	
							Mid Sem	Sem End
1		I	1A	Fundamentals of Accounting	5	4	25	75
2		I	1B	Business Organization and Management	5	4	25	75
3		I	1C	**Information Technology**	3	3	25	75
4		I	1C-P	**Information Technology - Practical**	2	1		50
5		II	2A	Financial Accounting	5	4	25	75
6		II	2B	Business Economics	5	4	25	75
7		II	2C	**E-commerce and Web Designing**	3	3	25	75
8		II	2C-P	**E-commerce and Web Designing - Practical**	2	1		50
9		III	3A	Advanced Accounting	5	4	25	75
10		III	3B	Business Statistics	5	4	25	75
11		III	3C	**Programming with C & C++**	3	3	25	75
12		III	3C-P	**Programming with C & C++ - Practical**	2	1		50
13		IV	4A	Corporate Accounting	5	4	25	75
14		IV	4B	Cost and Management Accounting	5	4	25	75
15		IV	4C	Income Tax	5	4	25	75
16		IV	4D	Business Laws	5	4	25	75
17		IV	4E	Auditing	5	4	25	75
18		IV	4F	**Data Base Management System**	3	3	25	75
19		IV	4F-P	**Data Base Management System - Practical**	2	1		50
Total					**75**	**60**	**375**	**1325**

Note: external practical exams to be conducted for **B.Com/B.A (Computer Applications)** students on par with B.Sc. (Computer Science) Students.

ACHARYA NAGARJUNA UNIVERSITY-GUNTUR

Structure of B.Com (Computer Applications) Programme under Revised CBCS
Semester-wise Syllabus under CBCS (w.e.f. 2020-21 Admitted Batch)

I Year B Com (CA), Semester- I

Discipline: COMPUTER APPLICATIONS

COURSE 1C: INFORMATION TECHNOLOGY SYLLABUS
COURSE 1C: INFORMATION TECHNOLOGY

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Unit-I Introduction computers

Computer Definition - Characteristics and Limitations of Computer, Generations of Computer, Classification of Computers, Applications of Computer, Hardware — Basic organization of Computer - Input and Output Devices

Unit- II (Understanding computer memory and software)

Memories: primary, secondary and cache memory, **Software:** types of software, system software, Application software, commercial software, open source software, domain software and free ware software, **Programming Languages**: Introduction to Programming Languages – Generations of Programming Languages

Unit- III Get in touch with Word Processing (MS word)

Features of MS Word - Parts of Word Window – Creating, Saving, Opening document, Printing, Formatting: Formatting of Text and Paragraph - Bullets and Numbering - Editing - Moving and Copying - Find and Replace Text –Tables: Creating tables, inserting and deleting rows and columns, Insertion of pictures – Insertion of clipart - Mail Merge

Unit-IV Working with MS Excel

Features of Excel, Parts of Excel window, Workbooks, Creating, Opening and Saving a Workbook, Worksheets, rows, columns, Inserting and Deleting rows and columns, cells, Entering labels, values, and formulas in worksheet, Formatting: Adjusting row height and column width - Formatting cell values, Formulas and Functions: operators used in formula, cell references in formula, Mathematical, Statistical, Logical and Text functions, Charts: Different types of charts, Creating a chart

Unit-V MS Power point

Features of PowerPoint, Parts of PowerPoint window, creating, saving and opening presentation, working with slides: Inserting, deleting, copying slides, editing text, formatting text, Formatting and Modifying Presentations: Applying transition and animation to the slides, inserting music or sound on a slide, viewing slide show

Learning Resources (Course 1C: Information Technology)

References:

(1) P.Mohan computer fundamentals- HimalayaPublications.

(2) R.K.Sharma and Shashi K Gupta, Computer Fundamentals - Kalyani Publications

(3) Fundamentals of Computers ByBalagurusamy, Mcgraw Hill

(4) Fundamentals of Computers Rajaraman V Adabala N

(5) MS-Office S.S. Shrivastava

(6) Microsoft Office 2007 Fundamentals, 1st Edition By Laura Story, Dawna Walls

Online Resources:

https://support.office.com/en-us/office-training-center

https://www.skillshare.com/browse/microsoft-office

https://www.tutorialspoint.com/computer_fundamentals/index.htm https://www.javatpoint.com/computer-fundamentalstutorial

https://edu.gcfglobal.org/en/subjects/office/

https://www.microsoft.com/en-us/learning/training.aspx

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I Year B Com (CA), Semester- I

Discipline: COMPUTER APPLICATIONS

COURSE 1C: INFORMATION TECHNOLOGY PRACTICAL SYLLABUS

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Computer Basics

1. Identifying different parts of Computer.
2. Identifying different input and output devices.
3. Installing a software (for example ms word, antivirus) using license key.
4. Identifying different desktop icons and it's working.

MS WORD

1. Creation of documents letters invitations etc,
2. Creating your personal resume.
3. Creating your class timetable.
4. Perform mail merge using MS Word

MS EXCEL

1. MS Excel performing different formulas
2. Creating charts in Excel.
3. Printing and adjusting MS Excel worksheet
4. Prepare a worksheet for calculating percentages of your class mates using different excel formulas.

MS Power Point.

1. Create presentation in power point
2. Inserting, deleting slides in Power Point
3. Illustrate Animation in presentation

RECOMMENDED CO-CURRICULAR ACTIVITIES:

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

Measurable

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity)
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups as teams))
4. Field studies (individual observations and recordings as per syllabus content and related areas (Individual or team activity)
5. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity))

General

1. Group Discussion
2. Visit to Software Technology parks / industries

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Coding exercises,
4. Practical assignments and laboratory reports,
5. Observation of practical skills,
6. Individual and group project reports,
7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work

ACHARYA NAGARJUNA UNIVERSITY-GUNTUR

Structure of B.Com (Computer Applications) Programme under Revised CBCS
Semester-wise Syllabus under CBCS (w.e.f. 2020-21 Admitted Batch)

I Year B Com (CA), Semester- I

Discipline: COMPUTER APPLICATIONS

PAPER – 1C: INFORMATION TECHNOLOGY

MODEL QUESTION PAPER

Time: 3 Hours **Max. Marks : 75**

SECTION-A

Answer any FIVE of the following Questions: (5 x 5= 25 Marks)

1. Write characteristics of computers
2. Write about different programming languages.
3. Write about cache memory
4. Write the differences between application and system software.
5. Explain how to create and save documents in Word
6. Write about how to insert page numbers in a document
7. Explain creating and using formulas in Excel
8. How will you insert and delete rows in Excel
9. Write about opening a presentation in Power Point
10. Explain about custom animation.

SECTION - B

Answer any FIVE of the following Questions (5 □ 10 =50 Marks)

11. Explain different input-output organization.
12. Write about classification of programming languages.
13. Define Memory. Write about Primary memory units
14. Write about generations of operating systems.
15. Write and explain the parts of Word window
16. Explain about how to create tables in MS Word
17. Write in detail about features of Excel
18. What is a chart? Explain different types of charts
19. Explain the creation procedure of a presentation in Power Point
20. Define animation. Explain how to you add transition and animation to the slides

Note: Paper Setter must select TWO Short Questions and TWO Essay Questions from Each Unit

Unit I: Introduction:

Introduction to Internet: Internet Terminology – History of the Internet – Advantages& disadvantages of Internet – How internet works

Electronic Commerce: Definition, types, advantages and disadvantages, E-Commerce transaction on World Wide Web. Electronic Market-Online shopping, Three models of Electronic Market - E-Business.

Unit-II: E-payment System

Models and methods of e–payments (Debit Card, Credit Card, Smart Cards, e-money), Digital Signatures (Procedure, Working And Legal Position), Payment Gateways, Online Banking (Meaning, Concepts, Importance), Risks Involved in e-payments.

Unit-III: On-line Business Transactions:

Meaning, Purpose, Advantages and Disadvantages of Transacting Online, E-Commerce Applications in Various Industries Like (Banking, Insurance, Payment of Bills), Benefits, Problems and Features, Online Services (Financial, Travel and Career), Online Learning, Online Shopping (Amazon, Flipkart, etc.)

Unit-IV: Website Designing

Introduction to HTML: Basic HTML – HTML document structure – HTML tags – Basefont tag – title tag – body tag – Horizontal Rule Tag - Text formatting tags – Character tags, **HTML Lists :** Ordered List , Unordered List & Definition List – Using colors – Using Images

Unit V: Website Designing:

Hyperlinks: Textual links, Graphical links, types of document links, anchor tag **HTML Tables** – table creations tags, Nested Tables, **Frames:** Frame introduction - frame creation tags – Nested Frames.

References:

(1) E-commerce and E-Business , Himalaya publishers
(2) E-Commerce by Kenneth C Laudon, PEARSON INDIA
(3) Web Design: Introductory with MindTap Jennifer T Campbell, Cengage India
(4) HTML & WEB DESIGN:TIPS& TECHNIQUES JAMSA, KRIS, McGraw Hill
(5) Fundamentals Of Web Development by Randy Connolly, Ricardo Hoar, Pearson
(6) HTML & CSS: COMPLETE REFERENCE POWELL,THOMAS, McGrawHill

Online Resources:

http://www.kartrocket.com
http://www.e-commerceceo.com
http://www.fastspring.com
https://teamtreehouse.com/tracks/web-design

RECOMMENDED CO-CURRICULAR ACTIVITIES:

(Co-curricular activities shall not promote copying from textbook or from others work and shall encourage self/independent and group learning)

MEASURABLE

1. Assignments (in writing and doing forms on the aspects of syllabus content and outside the syllabus content. Shall be individual and challenging)
2. Student seminars (on topics of the syllabus and related aspects (individual activity)
3. Quiz (on topics where the content can be compiled by smaller aspects and data (Individuals or groups as teams)
4. Field studies (individual observations and recordings as per syllabus content and related areas (Individual or team activity)
5. Study projects (by very small groups of students on selected local real-time problems pertaining to syllabus or related areas. The individual participation and contribution of students shall be ensured (team activity)

GENERAL

Group Discussion
Visit to Software Technology parks / industries

RECOMMENDED CONTINUOUS ASSESSMENT METHODS:

Some of the following suggested assessment methodologies could be adopted;

1. The oral and written examinations (Scheduled and surprise tests),
2. Closed-book and open-book tests,
3. Coding exercises,
4. Practical assignments and laboratory reports,

5. Observation of practical skills,
6. Individual and group project reports,
7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work

1. Creation of simple web page using formatting tags
2. Creation of lists and
3. Creation of web page with text tags
4. Creation of tables with attributes
5. Creation of hyperlinks
6. Creation of hyperlinks and including images
7. Creation of forms
8. Creation of framesets

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Structure of B.Com (Computer Applications) Programme under Revised CBCS
Semester-wise Syllabus under CBCS (w.e.f. 2020-21 Admitted Batch)

I Year B Com (CA), Semester- II

PAPER – 2C: E-COMMERCE & WEB DESIGNING

MODEL QUESTION PAPER

Time: 3 Hours **Max. Marks : 75**

SECTION-A

Answer any FIVE of the following Questions: (5 x 5= 25 Marks)

1. Define Internet. Write disadvantages of Internet
2. Write about e-business
3. Define e-payment system
4. Explain briefly the methods of e-payment system
5. Write the purpose of online business transaction
6. Write about online learning
7. Briefly explain HTML document structure
8. Write about Horizontal rule tag
9. Define table. Explain table creation tags.
10. Define Hyperlink

SECTION - B

Answer any FIVE of the following Questions (5 □ 10 =50 Marks)

11. Explain the working of Internet.
12. What is e-commerce? Write about the three models of e-market
13. Explain about Payment gateways
14. Write about various risks involved in e-payment system
15. Write and explain advantages of online transactions
16. Explain the features of online shopping with an example
17. Write in detail about text formatting tags in HTML
18. Write about lists in HTML
19. Explain different types hyperlinks used in a web page
20. Explain about frames in HTML

Note: Paper Setter must select TWO Short Questions and TWO Essay Questions from Each Unit

ACHARYA NAGARJUNA UNIVERSITY-GUNTUR

Structure of B.Com (Computer Applications) Programme under Revised CBCS
Semester-wise Syllabus under CBCS (w.e.f. 2020-21 Admitted Batch)

I Year B Com (CA), Semester- III

Discipline: COMPUTER APPLICATIONS

COURSE 3C: PROGRAMMING WITH C & C++

Model Outcomes:

At the end of the course, the students is expected to DEMONSTRATE the following cognitive abilities (thinking skill) and psychomotor skills.

A. *Remembers and states in a systematic way (Knowledge)*

1. Develop programming skills
2. Declaration of variables and constants use of operators and expressions
3. learn the syntax and semantics of programming language
4. Be familiar with programming environment of C and C++
5. Ability to work with textual information (characters and strings) & arrays

B. *Explains (Understanding)*

6. Understanding a functional hierarchical code organization
7. Understanding a concept of object thinking within the framework of functional model
8. Write program on a computer, edit, compile, debug, correct, recompile and run it

C. *Critically examines, using data and figures (Analysis and Evaluation)*

9. Choose the right data representation formats based on the requirements of the problem
10. Analyze how C++ improves C with object-oriented features
11. Evaluate comparisons and limitations of the various programming constructs and choose correctone for the task in hand.

D. Working in 'Outside Syllabus *Area' under a Co-curricular Activity*(Creativity)
Planning of structure and content, writing, updating and modifying computer programs for user solutions

E Exploring C programming and Design C++ classes for code reuse (Practical skills***)

SYLLABUS

COURSE 3C: PROGRAMMING WITH C & C++

Unit-I Introduction:

Introduction - Structure of C program – C character set, Tokens: Constants, Variables, Keywords, Identifiers – C data types - C operators (arithmetic, relational, logical, increment and decrement) - Standard I/O in C (scanf, printf) - Conditional Control statements (if and Switch) Statements.

Unit-II **Loops And Arrays:**

Repetitive statements: While, Do While and For Loops - Use of Break and Continue Statements –**Arrays**: Introduction – Types of arrays, one dimensional arrays - Declaration of one dimensional arrays–Accessing array elements–Storing values in an array –Two Dimensional Arrays Declaration of two dimensional arrays – Accessing array elements– Storing values in 2-D arrays.

Unit- III **Strings and Functions:**

Strings: Definition, Declaration and Initialization of String Variables - String Handling Functions – **Functions**: Defining Functions - Function Call – passing parameters: Call By Value, Call By Reference.

Unit- IV **Classes and Objects**

Introduction to OOP and its basic features - C++ program structure - Classes and objects - Friend Functions- Static Functions –Constructor – Types of constructors – Destructors - Operators

Unit-V **Inheritance:**

Inheritance - Types of Inheritance -Types of derivation- Public – Private - Protected Hierarchical Inheritance - Multilevel Inheritance – Multiple Inheritance - Hybrid Inheritance

Learning Resources (Course 3C: : Programming with C & C++)

References:

(1) Computer Fundamentals and Programming in C by Reema Thareja from Oxford University Press

(2) Mastering C by K R Venugopal and Sudeep R Prasad, McGraw Hill

(3) Let Us C, Yashavant Kanetkar

(4) E. Balagurusamy "Object oriented programming with C++

(5) R.Ravichandran "Programming with C++"

(6) The C++ Programming Language Bjarne Stroustrup

Online Resources:

https://www.tutorialspoint.com/cprogramming/index.html https://www.learn-c.org/

https://www.programiz.com/c-programming

https://www.w3schools.in/c-tutorial/

https://www.cprogramming.com/tutorial/c-tutorial.html

https://www.tutorialspoint.com/cplusplus/index.html

https://www.programiz.com/cpp-programminghttp://www.cplusplus.com/doc/tutorial/ https://www.learn-cpp.org/

https://www.javatpoint.com/cpp-tutorial

ACHARYA NAGARJUNA UNIVERSITY-GUNTUR

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Semester-wise Syllabus under CBCS (w.e.f. 2020-21 Admitted Batch)
I Year B Com (CA), Semester- II

COURSE 3C: PROGRAMMING WITH C & C++ Practical Component

1. Write C programs for
    a. Fibonacci Series
    b. Prime number
    c. Palindrome number
    d. Armstrong number.
2. 'C' program for multiplication of two matrices
3. 'C' program to implement string functions
4. 'C' program to swap numbers
5. 'C' program to calculate factorial using recursion
6. 'C++' program to perform addition of two complex numbers using constructor
7. Write a program to find the largest of two given numbers in two different classes using friend function
8. Program to add two matrices using dynamic constructor
9. Implement a class string containing the following functions:
    a. Overload + operator to carry out the concatenation of strings.
    b. Overload == operator to carry out the comparison of strings.
10. Program to implement inheritance.

RECOMMENDED CO-CURRICULAR ACTIVITIES:

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General

Group Discussion
Visit to Software Technology parks / industries

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5. Observation of practical skills,
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7. Efficient delivery using seminar presentations,
8. Viva voce interviews.
9. Computerized adaptive testing, literature surveys and evaluations,
10. Peers and self-assessment, outputs form individual and collaborative work

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I Year B Com (CA), Semester- III

COURSE 3C: PROGRAMMING WITH C & C++

MODEL QUESTION PAPER

Time: 3 Hours **Max. Marks : 75**

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SECTION-A

Answer any FIVE of the following Questions: (5 x 5= 25 Marks)

1. Write about constants used in C language
2. Explain briefly about switch statement
3. Write about break and continue statements
4. Explain two dimensional array declaration
5. Write about call by value method
6. Define Parameter.
7. Briefly explain classes and objects
8. Write about friend function in C++
9. Define Inheritance. Explain hybrid inheritance
10. Explain about benefits of inheritance

SECTION - B

Answer any FIVE of the following Questions (5 □ 10 =50 Marks)

11. Explain the structure of C program with an example.
12. What is an operator? Write about various operators used in C
13. Explain about repetitive statements with an example
14. Define an Array. Write about declaration of arrays in C
15. Illustrate string handling functions used in C language
16. What is a function? Write about defining a function
17. Write in detail about features of Object Oriented Programming
18. Explain different types of constructors in C++
19. Explain about various types of inheritance.
20. Write C++ program to implement multiple inheritance

Note: Paper Setter must select TWO Short Questions and TWO Essay Questions from Each Uni

COURSE 4C: Database Management System

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Unit-I (Overview of Database Management System)

Introduction, Data and Information, Database, Database Management System, Objectives of DBMS, Evolution of Database Management System, Classification of Database Management System.

UNIT-II(File-Based System)

File Based System. Drawbacks of File-Based System, DBMS Approach, Advantage of DBMS, Data Models, Components of Database System, Database Architecture, DBMS Vendors and their products.

UNIT-III (Entity-Relationship Model)

Introduction, The Building Blocks of an Entity-Relationship, Classification of Entity Set, Attribute Classification, Relationship Degree, Relationship Classification, Generalization and Specialization, Aggregation and Composition, CODD's Rules, Relational Data Model, Concept of Relational Integrity.

UNIT-IV (Structured Query Language)

Introduction, History of SQL Standards, Commands in SQL, Data types in SQL, Data Definition Language (DDL),Selection Operation Projection Operation, Aggregate Functions, Data Manipulation Language, Table Modification, Table Truncation, Imposition of Constraints, Set Operations.

UNIT-V (PL/SQL)

Introduction, Structure of PL/SQL,PL/SQL Language Elements, Data Types, Control Structure, Steps to Create a PL/SQL Program, Iterative Control Cursors, Steps to Create a Cursor, Procedure, Functions, Packages, Exceptions Handling, Database Triggers, Types of triggers.

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B Com (CA), Semester

QUESTION PAPER PATTERN FOR END SEMESTER EXAM UG

CBCS SEMESTER PATTERN

Time: 3 Hours **Max. Marks: 75**

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SECTION-A

Answer any FIVE of the following Questions: (5 x 5= 25 Marks)

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

SECTION - B

Answer any FIVE of the following Questions (5 □ 10 =50 Marks)

11.
12.
13.
14.
15.
16.
17.
18.
19.
20.

Note: Paper Setter must select TWO Short Questions and TWO Essay Questions from Each Unit