

HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD
(AUTONOMOUS)
BOARD OF STUDIES
DEPARTMENT OF COMPUTER SCIENCE

Chairperson

Ms. Vivekka Sharma
Head - Department of Computer Science
Hindi Mahavidyalaya
Nallakunta, Hyderabad.

Vivekka

University Nominee

Dr. C. Goverdhan
Ex-Officio Member - BOS
Department of Computer Science
Osmania University, Hyderabad.

Members of BOS

1. Prof. Shri. M. V. Ramana Murthy
Head - Department of Computer Science
Osmania University, Hyderabad
2. Mrs. B. Ramani
Subject Expert
Andhra Mahila Sabha Arts and Science
College
Osmania University Campus, Hyderabad
3. Shri. N. Srikanth
Industry Expert
Tech Mahindra, Hyderabad.

Murthy
30/09/2016

Ramani

Srikanth

Iskandar

HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD (AUTONOMOUS)

COMPOSITION OF THE BOARD OF STUDIES IN AN AUTONOMOUS COLLEGE

I. Composition: Department of Computer Science

1. Head of the department concerned (Chairperson)

Ms. Viveka Sharma – Department of Computer Science

2. The entire faculty of each specialization.

Ms. Viveka Sharma

3. One expert to be nominated by the vice-chancellor from a panel if six recommended by the College Principal.

1. Dr. C. Goverdhan Ex-Officio Member – BOS , Department of Computer Science

3. Three Experts in the subject from outside the college to be nominated by the Academic Council.

1. Prof. M. V. Ramana Murthy, Head – Department of Computer Science

2. Shri. N. Srikanth Industry Expert

3. Mrs. B. Ramani, Subject Expert – Department of Computer Science


Chairperson


University Nominee


Members


Principal




**DEPARTMENT OF COMPUTER SCIENCE
AGENDA OF THE MEETING**

- 1.1 Welcome address by the chair.
- 1.2 Details of choice base credit system.
- 1.3 Discussion and Distribution of Common Core Syllabus.
- 1.4 Marks allotted for Internal and end Semester exams.
- 1.5 Discussion on Question Paper Pattern of Semester Exam of Internal Exam and End Semester exam.
- 1.6 Discussion on scheme of Practical Question Paper
- 1.7 Panel of Examiners
- 1.8 Any other matter
- 1.9 Vote of Thanks

Murthy
30/09/2016

CP

Jehasale

Raman-1




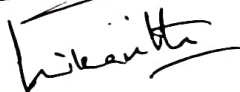
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**HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD
(AUTONOMOUS)
DEPARTMENT OF COMPUTER SCIENCE
BOARD OF STUDIES
Academic Year – 2016-17**

Minutes of BOS Meeting

BOS meeting of the Department of Computer Science was held 29/09/2016 at 1.00 P.M

The following members were present

Dr. C. Goverdhan.	-	Ex-officio Member	
Ms. Viveka Sharma	-	Chairperson	
Prof. Shri. M. V. Ramana Murthy	-	Member	
Mrs.B. Ramani	-	Member	
Shri. N. Srikanth	-	Member.	

1.1 Welcome address by the chair

The chair welcomed the University Nominee, Ex-officio Member BOS, O.U Department of Computer Science and Members of B.O.S.

1.2 Details of choice based credit system.

Members were informed that TSCHE has referred that from the academic year 2016-17 autonomous institutions have to follow CBCS .Osmania University has instructed all the Degree colleges including Autonomous Degree colleges to follow CBCS under which after passing the exam student will get the Grade in the Final Result. 4 Credits are given for theory paper and 1 credit is given for practical in each semester.

1.3 Discussion and Distribution of Common Core Syllabus.

- i. Members were informed by the chair that Department of Computer Science, Hindi Mahavidyalaya is following common core syllabus prescribed by Osmania University.

Syllabus copy for both the semesters is enclosed.

Syllabus was approved by the Member of BOS.

1.4 Marks allotted for Internal and end Semester exam will be followed as per O.U. (Will be subjected to change as prescribed by Osmania University).

1.4 Marks allotted for Internal and end Semester exam will be followed as per O.U. (Will be subjected to change as prescribed by Osmania University).

1.5 Discussion on Pattern and Model Paper of Semester exam and Model Paper of Internal Exam

1. It was informed by the department that in each Semester Two Internal exams will be conducted for 15 marks and 5 marks will be allotted for assignment. Average of marks of these two internal exams will be taken.
2. Semester exam will be conducted as per the Almanac which will be provided by the exam branch. Internal exam duration will be 30 Mts. and Semester exam duration will be of 3 hrs.
3. Scheme of Question paper for Semester I and Semester II was discussed. Theory paper for each semester will have 2 sections.
 - i) Section A contains 8 short Questions out of which 4 questions are to be answered, (4 questions X 5 marks =20)
 - ii) Section B contains 4 Essay Questions with internal choice. (4 questions X 15 marks =60)

Pattern of Model Question Paper was approved by Member of BOS.

1.6 Discussion on Scheme of Practical Question Paper.

It was decided in BOS meeting that 50 Marks Practical Exam of 3 hrs duration in each Semester and the Scheme of Practical Question Paper was approved by the Members of BOS

1.7 Panel of Examiners

The panel of examiners was approved by the members.
List is enclosed

1.8 Any other matter.

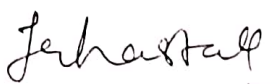
Question Paper Pattern is subjected to change as prescribed by Osmania University in the later stages.


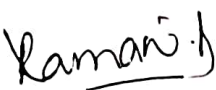
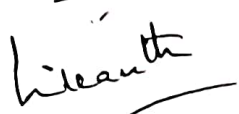
1.9 Vote of Thanks

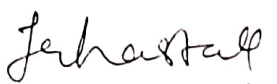
Meeting concluded with the Vote of Thanks by Ms. Vivekka Sharma


Chairperson


University Nominee


Members

1. 
2. 
3. 


Principal

HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD

(AUTONOMOUS)

B.Sc. 1st Year Computer Science

Semester – I

Paper I

Code:

Instruction

Theory Classes	4 Hrs/Week
Practical Classes	3 Hrs/Week
Credit for Theory	4
Credit for Practical	1
Duration of Semester Examination	3 Hrs
Duration of Internal Examination	30 Min
Semester Examination Marks	80 Marks
Internal Examination Marks	20(15+5) Marks

Unit-I

Computer Fundamentals: Introduction of Computers, Classification of Computers, Anatomy of a Computer, Memory Hierarchy, Introduction to OS, Operational Overview of a CPU.

Program fundamentals: Generation and Classification of Programming Languages, Compiling, Interpreting, Loading, Linking of a Program, Developing Program, Software Development.

Algorithms: Definitions, Different Ways of Stating Algorithms (Step-form, Pseudo-code, Flowchart), Strategy for Designing Algorithms, Structured Programming Concept

Basics of C: Overview of C, Developing Programs in C, Parts of Simple C Program, Structure of a C Program, Comments, Program Statements, C Tokens, Keywords, Identifiers, Data Types, Variables, Constants, Operators and Expressions, Expression Evaluation—precedence and associativity, Type Conversions.

Unit-II

Input-Output: Non-formatted and Formatted Input and Output Functions, Escape Sequences, Control Statements: Selection Statements—if, if-else, nested if, nested if-else, comma operator, conditional operator, switch; Iterative Statements—while, for, do-while; Special Control Statement—goto, break, continue, return, exit. **Arrays and Strings:** One-dimensional Arrays, Character arrays, Functions from ctype.h, string.h, Multi dimensional Arrays.

Unit-III

Functions: Concept of Function, Using Functions, Call-by-Value Vs Call-by-reference, Passing Arrays to Functions, Scope of Variables, Storage Classes, Inline Functions, and Recursion.

Pointers in C: Introduction, Address of Operator (&), Arrays and Pointers, Pointers and Strings, Pointers to Pointers, Array of Pointers, Pointer to Array, Dynamic Memory Allocation.

Unit-IV

User- defined Data Types: Declaring a Structure (Union) and its members, Initialization Structure Union), Accessing members of a Structure (Union), Array of Structures (Union), Structures Vs Unions, Enumeration Types. Files in C: Introduction, Using Files in C, Working with Text Files, Working with Binary Files, Files of Records, Random Access to Files of Records, Other File Management Functions.

Text Books


1. PradiDey, ManasGhosh, ComputerFundamentalsandProgramminginC, (2e) Reference

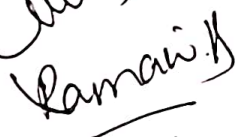
Reference books


1. HerbertSchildt, TheCompleteReferenceC
2. ByronS.Gottfried, TheoryandProblemsofProgrammingwithC
3. PaulDeitel, HarveyDeitel, CHowToProgram
4. IvorHorton, BeginningC
5. BrianW.Kernighan, DennisM.Ritchie, TheCProgrammingLanguage

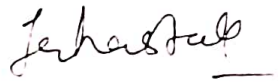

Chairperson


University Nominee


Member


Member


Member


Principal

HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD

(AUTONOMOUS)

B.Sc. 1st Year Computer Science

Semester – 1

Paper - 1

Theory Model Question Paper

Time: 2 Hrs 30 Min

Max Marks: 80

Section – A

Note: Answer any four questions carry equal marks

4 x 5 =20 Marks

1. What are different data types in C?
2. Distinguish between variable and constant
3. Explain the different selection statements.
4. Write the array applications
5. What is recursion? What is its advantage?
6. What is the difference between array and pointer?
7. Write brief notes on Unions
8. What is meant by enumerated data type?

SECTION – B

Note: Answer all the questions using internal choice

4 x 15=60 Marks

All questions carry equal marks

1. a) Define Computer. Describe two major components of computer system.
Or
b) Explain various identifiers in C program. And also discuss about precedence in expression evaluation with a suitable example
2. a) Explain with a sample program about while, do while, switch statements in C .
Or
b) What is array? Explain about one dimensional and two dimensional arrays along with examples.
3. a) Discuss in detail about different types of functions
Or
b) What is a pointer? Explain how can be it be declared and initialized

P.T.O

Kamali

Chhabra
Jehas

Or

4. a) Explain about declaration, initialization and accessing of structures.

Or

b) Explain about different types of files.

Note: Question Paper Pattern is subjected to change as prescribed by Osmania University in the later stages

vivek
Chairperson

[Signature]
University Nominee

[Signature]
Members
Principal

1. *[Signature]*
2. *[Signature]*
3. *[Signature]*

HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD
(AUTONOMOUS)

B.Sc. 1st Year Computer Science
Semester – I
Practical Paper - I

Code:

Instruction	3 Hrs / Week
Duration of Exam	3 Hrs
Marks for Exam	50 Marks
Laboratory Course	36 Hrs

1. Write a program to find the largest two(three)numbers using if and conditional operator.
2. Write a program to print the reverse of a given number.
3. Write a program to print the prime number from 2 t on where n is given by user.
4. Write a program to find the roots of a quadratic equation using switch statement.
5. WAP to print a triangle of stars as follows(take number of lines from user):

```
*  
***  
*****  
*****
```

6. Write a program to find largest and smallest elements in a given list of numbers.
7. Write a program to find the product of two matrices..
8. Write a program to find the GCD of two numbers using iteration and recursion.
9. Write a program to illustrate use of storage classes.
10. Write a program to demonstrate the call by value and the call by reference concepts.
11. Write a program that print s a table indicating the number of occurrences of each alphabet in the text entered as command line arguments.
12. Write a program to illustrate use of data type enum.
13. Write a program to demonstrate use of string functions string.h headerfile.
14. Write a program that opens a file and counts the number of characters in a file.
15. Write a program to create a structure Student containing fields for Roll No. , Name, Class, Year and TotalMarks.Create10 students and store them in a file.
16. Write a program that opens an existing text file and copies it to an new text file with all lowercase letters changed to capital letters and all other characters unchanged.

Note:

1. Write the Pseudo code and draw Flow Chart for the above Programs.
Recommended to use Open Source Software: GCC on Linux; DevC++ (or) CodeBlocksforWindows10.


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(AUTONOMOUS)

B.Sc. 1st Year Computer Science
Semester – I
Practical Paper - I

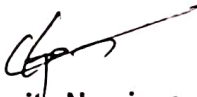
Time: 3Hrs

Total Marks: 50

25

I	Program Execution	30 Marks
II	Record	10 Marks
III	Viva	10 Marks


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HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD
(AUTONOMOUS)

B.Sc. 1st Year Computer Science
Semester – II
Paper -II

Code:

Instruction

Theory Classes	4 Hrs/ Week
Practical Classes	3 Hrs/ Week
Credit for Theory	4
Credit for Practical	1
Duration Semester Examination	3 Hrs
Duration Internal Examination	30 Min
Semester Examination Marks	80 Marks
Internal Examination Marks	20(15 +5) Marks

Unit – I

Introduction to C++: Applications, Example Programs, Tokens, Data Types, Operators, Expressions, Control Structures, Arrays, Strings, Pointers, Searching and Sorting Arrays.

Functions: Introduction, Prototype, Passing Data by Value, Reference Variables, Using Reference Variables as Parameters, Inline Functions, Default Arguments, Overloading

Functions, Passing Arrays to Functions.

Object Oriented Programming: Procedural and Object-Oriented Programming, Terminology, Benefits, OOP Languages, and OOP Applications.


Unit – II

Classes: Introduction, Defining an Instance of a Class, Why Have Private Members? Separating Class Specification from Implementation, Inline Member Functions, Constructors, Passing Arguments to Constructors, Destructors, Overloading Constructors, Private Member Functions, Arrays of Objects, Abstract Array Data Types, Instance and Static Members, Friends of Classes, Memberwise Assignment, Copy Constructors, Operator Overloading, Object Conversion, Aggregation.

Unit – III

Inheritance: Introduction, Protected Members and Class Access, Base Class Access Specification, Constructors and Destructors in Base and Derived Classes, Redefining Base Class Functions, Class Hierarchies, Polymorphism and Virtual Member Functions, Abstract Base Classes and Pure Virtual Functions, Multiple Inheritance.

C++ Streams: Stream Classes, Unformatted I/O Operations, Formatted I/O Operations.


Ramanand
Vivek

Unit – IV

Exceptions: Introduction, Throwing an Exception, Handling an Exception, Object-Oriented Exception Handling with Classes, Multiple Exceptions, Extracting Data from the Exception Class, Rethrowing an Exception, Handling the bad_alloc Exception.

Templates: Function Templates–Introduction, Function Templates with Multiple Type, Overloading with Function Templates, Class Templates – Introduction, Defining Objects of the Class Template, Class Templates and Inheritance, Introduction to the STL.

Text Books:


Tony Gaddis, Starting out with C++: from control structures through objects (7e)


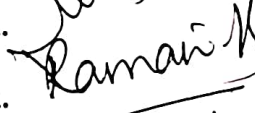
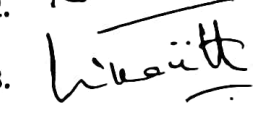
References

1. B. Lippman, C++ Primer
2. Bruce Eckel, Thinking in C++
3. K.R. Venugopal, Mastering C++
4. Herbert Schildt, C++: The Complete Reference
5. Bjarne Stroustrup: The C++ Programming Language


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1. 
2. 
3. 


Principal

HINDI MAHAVIDYALAYA, NALLAKUNTA, HYDERABAD
(AUTONOMOUS)

B.Sc. 1st Year Computer Science

Semester – II

Practical Paper -II

Code:

Instruction

Duration of Exam

3 Hrs

Marks for Exam

80 Marks

Laboratory Course

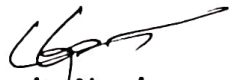
36 Hrs

1. Write a C++ program to check whether the given number is Armstrong or not.
2. Write a program to print the sum of digits of a given number.
3. Write a program to print the prime number from 2 to n where n is natural number given.
4. Write a program to find largest and smallest elements in a given list of numbers.
5. Write a C++ program to find area of a rectangle, circle, and square using constructors.
6. Write a C++ program using friend and inline functions.
7. Write a menu driven program that can perform the following functions on strings. (Use overloaded operators where possible).
 - a. Compare two strings for equality (== operator)
 - b. Check whether first string is smaller than the second (<= operator)
 - c. Copy the string to another.
 - d. Extract a character from the string (overload [])
 - e. Reverse the string.
 - f. Concatenate two strings (+ operator)
8. Write a C++ program to demonstrate single inheritance and multiple inheritances.
9. Write a C++ program to demonstrate hierarchical inheritance and multipath inheritance
10. Write a C++ program to implement copy constructor.
11. Write a C++ program to demonstrate exception handling.
12. Write a C++ program to demonstrate the class template.
13. Write a C++ program to menu driven program for accepting two numbers and perform calculator operations addition, subtraction, multiplication, division and remainder using function template.
14. Write a C++ program to demonstrate various input-output manipulations.
15. Write a C++ program to implement ADT.
16. Write a C++ program to demonstrate array of objects.

Chair Person



University Nominee

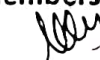


Members

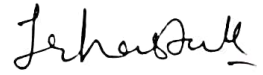
1.

2.

3.



Principal



Hindi Mahavidyalaya
(Autonomous)
Computer Science Department
Panel of Examiners

I/II Sem

S.No.	Name and Designation	Mobile No.
1	B. Ramani Andhra Mahila Sabha Arts and Science College Osmania University Campus.	9441214888
2	G. Aparna Andra Mahila Sabha Arts and Science College Osmania University Campus.	9440137700
3	N. Veena Nizam College (Autonomous) Basheerbagh, Hyderabad.	9849743764
4	Sunitha Koti Women's College, Hyderabad	9951944377

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Chairperson

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University Nominee

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Members

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Principal

Ramani

Vivek