Government of Karnataka Department of Technical Education Bengaluru

	Course Title:	Programming with C	
C	Scheme (L:T:P) : 4:0:0	Total Contact Hours: 52	Course Code: 15CS31T
	Type of Course: Lectures, Self Study & Student Activity	Credit :04	Core/ Elective:
CIE- 25 Mark	XS .	S	SEE- 100 Marks

Prerequisites

Knowledge of basic mathematics and IT skills..

Course Objectives

Understand the syntax of data types, analyze various formatting styles for input/output and appreciate the use of arrays, strings and functions to write C programs.

Course Outcome

On successful completion of the course, the students will be able to attain below Course Outcome (CO):

	Course outcome	CL	Linked PO	Teaching Hours
CO1	Illustrate syntax rules for numerical constants and variables, data types, arithmetic operators and expressions and Articulate them with different types of input/output formats using simple problems.	R, U	1,2,3,4,8,9,10	10
CO2	Discuss different branching and looping statements and experiment using simple programs.	U, A	1,2,3,4,8,9,10	14
CO3	Discuss different types of functions and write simple programs.	U, A	1,2,3,4,8,9,10	06
CO4	Explain different types of arrays and write simple programs.	U, A	1,2,3,4,8,9,10	08
CO5	Describe preprocessor and Discuss different types of string functions.	U, A	1,2,3,4,8,9,10	06
CO6	Describe and differentiate between structure and unions to write simple programs.	' 1.2.3.4.8.9.10		08
		Total	sessions	52

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
Programming with C	3	3	3	3	-	-	-	3	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO. If \geq 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3 If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2 If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1 If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

Course Content and Blue Print of Marks for SEE

Unit No	Unit Name	Hour	Que	Questions to be set for SEE		Marks Weightage	Marks Weightage (%)
			R	U	A	A	
I	Introduction to 'C' Language	10	5	12	10	27	19.24
II	Decision making- Branching and Looping	14	-	15	23	38	26.9
III	Functions	06	-	10	10	20	11.54
IV	Arrays	08	-	07	15	22	15.39
V	Strings & Pre-processor	06	-	06	10	16	11.54
VI	Structures & Unions	08	-	12	10	22	15.39
	Total	52	5	62	78	145	100

UNIT I: Introduction to 'C' Language

10 Hrs

Character set, Variables and Identifiers, Built-in Data Types, Variable Definition, Declaration, C Key Words-Rules & Guidelines for Naming Variables. Arithmetic operators and Expressions, Constants and Literals, Precedence and Order of Evaluation. Simple assignment statement, Basic input/output statement, Simple 'C' programs.

Algorithms – Definition and Characteristics. Simple algorithms. Flow chart – Type of flow chart. Simple flow charts

UNIT II: Decision making- Branching and Looping

14 Hrs

Conditions, Relational Operators, Logical Operator. if statement, if-else statement, nested if-else, if-else ladder, Switch, Break, Continue, Goto and Labels. Looping statements – while, do-while, for and nested for loop.

UNIT III: Functions 06 Hrs

Definition of Function, Standard Library of C functions, function prototype, Formal parameter list, Return Type, Function call, Block structure, Passing arguments to a Function: call by value.

UNIT IV: Arrays 08Hrs

What is an Array? Declaring an Array, Initializing an Array. One dimensional arrays: Array manipulation; Finding the largest/smallest element in array; Searching & Sorting of element from an array; Declaring & Initialization of Two dimensional arrays, Addition/Multiplication of two matrices, Transpose of a square matrix; Null terminated strings as array of characters, arrays as function arguments

UNIT V: Strings and Pre-processors

06 Hrs

Strings - Introduction, Declaring & Initializing string variables, Reading & writing strings from variables, Arithmetic operations & characters, Putting strings together, Comparison of two strings, String handling functions

Pre-processors - Introduction, Macro substitution, File inclusion..

UNIT VI: Structures and Unions

08 Hrs

Basic of Structures, Structures variables, initialization, structure assignment, nested structure, structures and arrays: arrays of structures, Unions, Size of structures, Structure as function arguments

Text books

Programming with ANSI-C, E. Balaguruswamy, Sixth Edition, Tata Mcgraw Hill.

References

- 1. Programming with ANSI & Turbo C, Ashok Kamthane, Second Edition, Pearson Education.
- 2. Let us C, Yashavant P Kanetkar, 14th Edition, BPB publication, **ISBN** 9788183331630
- 3. Programming in C and Data Structure, P.B.Kotur, Sapna Book house
- 4. http://spoken-tutorial.org/tutorial-search/?search_foss=C+and+Cpp&search_language=English
- 5. http://www.tutorialspoint.com/cprogramming/
- 6. http://www.indiabix.com/online-test/c-programming-test/

Suggested student activities

Note: the following activities or similar activities for assessing CIE (IA) for 5 marks (Any one)

Student activity like mini-project, surveys, quizzes, etc. should be done in group of 3-5 students.

- 1. Each group should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course coordinator and programme coordinator.
- 2. Each group should conduct different activity and no repeating should occur

1	Explore and analyze topics to improve the level of creativity and analytical skill by									
	taking Quiz tests / assignments. Documents have to be maintained as a record.									
2	Create a power point presentation on the topic relevant to course or advanced topic									
	as an extension to the course to improve the communication skills. Documents have									
	to be maintained as a record									
3	Visit different sites relevant to topics. Listen to the lectures and submit a									
	handwritten report									

Course Delivery

The course will be delivered through lectures and Power point presentations/ Video

Course Assessment and Evaluation Scheme

Method	What		To who	When/Where (Frequency in	Max Marks	Evidence collected	Course outcomes
			m	the course)			
ant	CIE	CIE IA		Three IA tests (Average of three tests will be computed)	20	Blue books	1 to 6
Direct Assessment			Students	Student activities	05	Report	1 to 6
t Ass				Total	25		
Direc	SEE	End Exam		End of the course	100	Answer scripts at BTE	1 to 6
	Student Feed on course	tudent Feedback n course		Middle of the course		Feedback forms	1,2,3 Delivery of course
Indirect Assessment	End of Cour Survey	se	Students	End of the course		Questionnaires	1 to 6 Effectiveness of Delivery of instructions & Assessment Methods

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off

to the next higher digit.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	10
2	Understanding	45
3	Application	45

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- 1. Blue books (20 marks)
- 2. Student suggested activities report for 5 marks
- 3. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

FORMAT OF I A TEST QUESTION PAPER (CIE)

Test/Date	and Time	Semester/year	Course/Course C	rse/Course Code Max			
	5 th weak of	I/II SEM				20	
sem 10	0-11 Am	Year:					
Name of C	ourse coordir	nator :			Units:_	_	
CO's:							
				<u> </u>	T	ı	
Question		Question		MARKS	CL	со	РО
no		Question		Wiz HCC	<u> </u>		. •
1							
2							
3							
4			·				

Note: Internal Choice may be given in each CO at the same cognitive level (CL).

MODEL QUESTION PAPER (CIE)

Test/Date and Time	Semester/year	Course/Course Code	Max Marks
Ex: I test/6 th weak	III SEM	Programming with C	20
of sem 10-11 AM	Year: 2015-16	Course code:15CS31T	20

Name of Course coordinator:

Units:1,2 Co: 1,2

Note: Answer all questions

Questio n no	Question	CL	C O	РО
1	What is variable? Write the rules and guidelines for naming variable? (5)	R	1	1,2
	OR			
	Evaluate the expression $(a + b) * (c + d) + e - f/g*h + 3.25$, where a=5,			
	b=3, c=-2, d=7, e=1, f=6, g=8, h=1			

2	Define algorithm? Explain its characteristics (5)	U	1	1,2
	OR Write a flow chart and C program to find the sum and average of three numbers	A		
3	Give the general syntax and an example of dowhile loop statement. Why it is called as "exit-controlled" loop? (5)	U	2	1,2
4	Explain printf() statement with an example.	A	2	1,2

Format for Student Activity Assessment

DIMENSION	Unsatisfactory 1	Developing 2	Satisfactory 3	Good 4	Exemplary 5	Score
Collection of data	Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collects some basic information; refer to the topic	Collects relevant information; concerned to the topic	Collects a great deal of information; all refer to the topic	3
Fulfill team's roles & duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs all duties	Performs all duties of assigned team roles with presentation	4
Shares work equally	Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Does the assigned job without having to be reminded.	Always does the assigned work without having to be reminded and on given time frame	3
Listen to other Team mates	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Listens, but sometimes talk too much	Listens and contributes to the relevant topic	Listens and contributes precisely to the relevant topic and exhibit leadership qualities	3
					TOTAL	13/4=3.25=4

^{*}All student activities should be done in a group of 4-5 students with a team leader.

MODEL QUESTION PAPER

Diploma in Computer science & Enginnering III- Semester

Course Title: Programming with C

Time: 3 Hours Max Marks: 100

PART-A

Answer any SIX questions. Each carries 5 marks.

5X6=30 Marks

Code: 15CS31T

- 1) What is a variable? Write the rules and guidelines for naming variable?
- 2) Explain scanf() statement with an example
- 3) Compare while and do....while statement.
- 4) Explain Relational and Logical operators
- 5) Write a short note on C library functions
- 6) What are the advantages of functions?
- 7) List string handling functions.
- 8) Define a structure. Give general syntax of a structure. Explain with an example.
- 9) Compare array versus structures.

PART-B

Answer any <u>SEVEN</u> full questions each carries 10 marks.

10X7=70 Marks

- 1. Explain the data types of C language
- 2. Write a C program to swap the values of two variables without using third variable
- 3. Explain the switch statement with syntax with an example.
- 4. Write a program to find the sum of n natural numbers.
- 5. Explain If.....else statements with an example.
- 6. Explain the following:
 - i. Passing argument to a function
 - ii. Returning value from a function
- 7. a) List the advantages and disadvantages of an array.
 - b) What is an array? How are arrays declared and initialized?
- 8. Write a program to find the transpose of a matrix.
- 9. Explain the following function with an example:

i. getchar() ii. strrev() iii. strcmp() iv. strcat() v. strcpy() 10. Write a program to create structure with an employee details & display the same.



MODEL QUESTION BANK

Diploma in Computer Science & Engineering

III Semester

Course Title: Programming with C

CO	Question	CL	Marks			
	What is a token? Give example for each type of token.	R				
	What is a constant? Explain different types of C constants.	R				
	What is variable? Write the rules and guidelines for naming variable?	R				
	Define the term Identifier. Give an example.	R				
	List the basic data types with byte specification	U				
	List the hierarchy (precedence) rules of arithmetic operators.	U				
	Evaluate the expression 2 + 1 * 3 - 4 % 3 * 1 + 16 / 2 % 5 and smilar type expressions to be solved having arithmetic, relational and logical operators also					
	List the important features of C language.	U				
	Give a general form of ternary operator, Explain with an example.	A				
	Explain simple assignments in C. Give an example.	U				
	List input and output functions	U				
	Explain printf() statement with an example.	A				
	Explain scanf() statement with an example.	A				
	Define algorithm? Explain its characteristics	U				
I	Define flow chart? List the symbols used in flow-chart	U				
	Write a algorithm and C program to find the sum and average of three numbers	A				
	With general syntax explain formatted input-output statements. Give example for each.	U				
	Define the following with an example: i. Increment Operator. ii. Decrement Operator	U				
	1. Explain the basic data types of C language.	U				
	Define the following with an example:	U				
	i. C Keyword.					
	iii. Constants. iv. Format Specifier v. Arithmetic Expression.					
	Define the following terms. Give one example each.	U				
	i. Constant. ii. Keyword.		10			
	iii. Relational Expression. iv. Assignment statement.					

	v. Conditional operator.		
	Write a flow chart and C program to swap the values of two variables	A	
	without using third variable.		
	Explain the basic structure of C program.	U	
	Write an algorithm and C program to find the largest of three numbers using conditional operators.	A	
	Write an algorithm and flow chart to compute sum of <i>n</i> numbers	A	
	Write an algorithm and C program to find area and circumference of a circle (circum= $2\pi r$ and Area= πr^2	A	
	Explain different logical operators with examples.	U	
	Explain different relational operators with examples.	U	
	Write the general syntax of if & if-else statement.	U	
	Compare while and dowhile statement.	U	
	Compare if and if-else statement.	U	
	Illustrate and explain nested if –else statement.	U	
	state and explain if –else ladder statement.	U	
	Write a program to find the largest of three numbers.	A	05
	With general syntax, explain the significance of break and continue statement in loops	U	
	Define the following i. break.	U	
	ii. goto.and label iii. continue.		
II	List and explain any two unconditional statements/jumping statements.	U	
	Explain Relational and Logical operators.	U	
	With general syntax, explain the need of break statement in Switch.	U	
	Give the general syntax and an example of dowhile loop statement.	U	
	Why it is called as "exit-controlled" loop?	TT	
	Differentiate between break and continue statements.	U	
	Write a C program to check whether the given number is odd or even.	A	
	Explain the logical operators with example.	U	
	Explain relational operators with example.	U	
	Explain for statement with an example.	U	
	Explain Ifelse statements with an example.	A	
	Explain nested for loop with the general syntax.	U	
	Write a program to find roots of quadratic equation using switch statement.	A	
	Explain the switch statement with syntax, with an example.	A	
	Explain entry controlled and exit controlled loop with an example.	A	
	Write a program to find the numbers and sum of all numbers greater than 150 and less than 250 which are divisible by 8.	A	
	Write a program to find the largest of 3 numbers using ifelse statement.	A	10
	Write a program to find smallest of three numbers using nested ifelse statement.	A	
	Write a program to check whether the given number is prime or not.	A	

	Write a program to generate Fibonacci series.	A						
	Write a program to find the sum of <i>n</i> natural numbers.	A						
	Write a program to find the reverse of a given numbers.	A						
	Write a program to count even and odd from n natural numbers.	A						
	Define function. List different types of functions.							
	What are the advantages of functions?	U						
	List the difference between actual parameters and formal Parameters.	U						
	Explain scope and lifetime of a variable in a function.	U						
	What do you mean by user defined function? Explain.	U						
	Write a short note on C library functions.	U						
	Write a user defined function great() that computes greatest of two	A	05					
Ш	numbers and return the largest number to function main().							
	Write the block structure of a function.	U						
	Define the following	U						
	1. Formal parameter							
	2. Actual parameter							
	3. Return type 4. Function call							
	What is a function prototype give an example.	U						
	Write a program to find the factorial of a given number using function.	A						
	Write a program to find the GCD of a given number using function.	A						
	Explain Call by Value with an example.	U						
	Explain the following with a example:	A	10					
	i. Passing argument to a function	11						
	ii. Returning value from a function							
	What is an array? Explain how to declare and initialize a single	U						
	dimension array?							
	·							
	With an example, explain declaration & initialization of two	U						
	With an example, explain declaration & initialization of two dimensional array.							
	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array.	U						
	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example.	U A						
	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements.	U A A						
	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example.	U A A U	05					
	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays.	U A A U U	05					
	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional	U A A U	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also	U A A U U	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional	U A A U U	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format.	U A A U U A	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format. Write a program to transpose the given matrix. List the advantages and disadvantages of an array.	U A A U U A A	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format. Write a program to transpose the given matrix.	U A A U A A U A U A U A U A	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format. Write a program to transpose the given matrix. List the advantages and disadvantages of an array. Write a C program to find the sum of principle diagonal elements of a	U A A U A A U A U A U A U A	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format. Write a program to transpose the given matrix. List the advantages and disadvantages of an array. Write a C program to find the sum of principle diagonal elements of a matrix. Write a program to search an element in an array. Write a program to find the sum and number of positive numbers and	U A U U A A U A U A	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format. Write a program to transpose the given matrix. List the advantages and disadvantages of an array. Write a C program to find the sum of principle diagonal elements of a matrix. Write a program to search an element in an array. Write a program to find the sum and number of positive numbers and negative numbers in an array	U A A U A A U A A A A A A	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format. Write a program to transpose the given matrix. List the advantages and disadvantages of an array. Write a C program to find the sum of principle diagonal elements of a matrix. Write a program to search an element in an array. Write a program to find the sum and number of positive numbers and negative numbers in an array Write a program to sort 'N' elements of an array using simple sort.	U A A U A A U A A A A A A A	05					
IV	With an example, explain declaration & initialization of two dimensional array. Compare one dimensional array with two dimensional array. Explain multidimensional array with an example. Write an algorithm to search a given key in the array of elements. Discuss one dimensional array with example. Explain different operations on arrays. Write a program in C to store 25 elements (integers) in two-dimensional array called "temp" in 5-rows and 5-columns. The program should also display these numbers in a matrix format. Write a program to transpose the given matrix. List the advantages and disadvantages of an array. Write a C program to find the sum of principle diagonal elements of a matrix. Write a program to search an element in an array. Write a program to find the sum and number of positive numbers and negative numbers in an array	U A A U A A U A A A A A A	05					

Write a program to find the sum of two matrices.	A	10
Write a C function to compute trace and norm of a matrix.	A	
Write C function to compute largest of <i>N</i> numbers.	A	
Define string. How to Declare & Initialize string variables with an example.	U	
Write a program to concatenate two strings using in-built string function.	A	
Explain how to read the string from the terminal and write a string to terminal with an example.	the U	
Explain with an example the Null-terminated strings as "Array of Characters".	U	
Write a C program to check whether the given string is a palindrome not.	e or A	05
List string handling functions.	U	
Write a program to compare any two strings using string functions	A	
List the advantages of preprocessor directives.	A	
Explain briefly how to use #define directive.	A	-
Write a short note on File inclusion.	U	
Explain with Example the #include preprocessor directive.	A	
How do you define symbolic constants? Illustrate with an example	A	
Explain the following function with an example:	U	10
i. getchar() ii. strrev() iii. strcmp() iv. strcat() v. strcpy()		
Define a macro. Explain macro substitution with an example.	U	
Define string. Give an example. Explain the various string handling functions with an example.	U	
Write a C program to verify that the given string is palindrome or no using iterative method.	ot A	
Write a program to find the area of a circle using macros.	A	
Write a note on the following: a. Pre-processor directive b. Macro substitution	U	
Define a structure. Explain with an example, the general syntax of a structure.	U	5
What are structure variables? Explain how to declare and initialize a structure variable.	U	
Define a union. Explain with an example, the general syntax of a uni	ion. U	
List the difference between Union and Structure.	U	
VI Sempare Arrays versus Structures.	U	
Define array of structure. Give an example.	U	
Explain array variable as a structure member with an example.	U	
Explain array of structure with an example.	U	10
Explain the need of structure within a structure (nested structure) with an example	th U	

1	Write a program to read 'N' student information and display it.	A
	Write a program to create structure with an employee details & display	A
	the same	



Government of Karnataka Department of Technical Education Bengaluru

Intel® Review ** Processor Block Disgram	Course Title:	Computer Organization	
	Scheme (L:T:P) : 4:0:0	Total Contact Hours: 52	Course Code: 15CS32T
	Type of Course: Lectures, Self Study & Student Activity.	Credit :04	Core/ Elective:
CIE- 25 Mark	S	S	SEE- 100 Marks

Prerequisites

Fundamentals of Digital electronics and basics of Computers and its peripherals.

Course Objectives

Understand the organization of a computer with its various processing units, memory and peripherals.

Course Outcome

On successful completion of the course, the students will be able to attain below Course Outcome (CO):

	Course outcome	CL	Linked PO	Teaching Hours
CO1	Recognize and explain the functional units of computers	R	1,2,10	02
CO2	Describe assembly languages and machine instructions by analyzing how the data is stored and fetched from memory.	U, A	1,2,3,4,8,10	10
CO3	Explain the execution of complete instruction and bus organizations.	$oldsymbol{U}$	2,8,9,10	08
CO4	Identify various interrupt handling mechanism and buses.	U, A	1,2,3,8,9,10	10
CO5	Differentiate between different types of memories.	U, A	1,2,3,4,5,6,7,8,9,10	14
CO6	Discuss core architecture and pipelined concept.	U	2,10	08
		Total	sessions	52

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
Computer Organisation	3	3	2	2	1	1	1	3	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO. If \geq 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3 If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2 If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1 If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

Course Content and Blue Print of Marks for SEE

Unit No	Unit Name	Hour	_	Questions to be set for SEE		Marks Weightage	Marks Weightage (%)
			R	U	A	A	
I	Basic Structure Of Computers	02	5	-	-	5	4
II	Machine Instructions and Programs	10	-	20	8	28	18
III	Basic Processing Unit	08	-	22	-	22	15
IV	Input/Output Organization	10	-	18	10	28	18
V	The Memory system	14	-	20	18	38	30
VI	Processors and Pipelining	08	-	24	-	24	15
	Total	52	5	104	36	145	100

UNIT I: Basic Structures of Computers

02 Hrs

Functional Units, Input Unit, Memory Unit, Arithmetic and Logic Unit, Output Unit, Control Unit, Basic Operational Concepts, Bus Structures.

UNIT II: Machine Instructions & Programmes

10 Hrs

Memory Locations and Addresses, Byte Addressability, Big Endian and Little Endian Assignments, Word Alignment, Accessing numbers, characters and character strings, Memory Operations, Instruction and Instruction sequencing, Register Transfer notation, Assembly Language notation, Basic instruction types, Instruction execution and straight line sequencing, Branching, Condition codes, Addressing modes, Implementation of variables and constants, Indirection and pointers, Indexing and arrays, Relative addressing, Additional modes, Assembly Language, Assembler directives, Assembly and execution of programs, Basic Input- Output Operations.

UNIT III: Basic Processing Unit

08 Hrs

Some Fundamental Concepts, Register transfers, Performing an Arithmetic or Logic operation, Fetching a word from memory, Storing a word in memory, Execution of a complete Instruction, Branch instructions, Multiple Bus Organization, Hardwired

Control(basic block diagram only), A complete processor, Basic organization of Micro programmed Control Unit.

UNIT IV: Input Output Organization

10 Hrs

Accessing I/O Devices, Interrupts, Interrupt Hardware, Enabling and Disabling Interrupts, Handling Multiple Devices, Controlling Device requests, Exceptions, Direct Memory Access, Bus arbitration, Buses, Synchronous bus, Asynchronous bus, Interface Circuits, Parallel port and Serial port (Basic concept only), Standard I/O Interfaces (Basic concepts only), Peripheral Component Interconnect (PCI) Bus, SCSI Bus(Basic concepts only), Universal Serial Bus (USB) (Basic concepts only)

UNIT V: The Memory System

14 Hrs

Some Basic Concepts, Semiconductor RAM Memories, Internal Organization of memory chips, Static Memories, Asynchronous DRAMs, Synchronous DRAMs, Structure of larger memories, Memory system consideration, Rambus memory, Read-Only Memories-ROM, PROM, EPROM, EPROM, Flash Memory, Speed, Size and Cost, Cache Memories...

UNIT VI: Processors and Pipelining

08 Hrs

Processor- Introduction, Advanced processor technology, instruction set architectures, CISC scalar processor, RISC scalar processor, comparison CISC and RISC, super scalar processor (basic concept only), VLIW architecture, comparison of super scalar and VLIW, Multi core architecture

Pipelining- Introduction, pipeline principles-linear pipeline processor-Asynchronous model, synchronous model, Non linear pipeline processor, classification of pipeline processor

Text Books

- 1. Computer Organization, Carl Hamacher, zvonko Vranesic and Safwat Zaky, McGraw Hill, 5th edition (Chapters 1, 2, 4, 5, 7, for UNIT I to UNIT V)
- 2. Advanced Computer Architecture (A practical approach), Rajiv Chopra, S. Chand, Revised edition, reprint 2014, ISBN 8121930774 for *UNIT VI page no 133 to 138*, 143 to 145, 192 to 194, 218 to 219, 221 to 223

References

- 1. http://elearning.vtu.ac.in/06CS46.html
- 2. http://nptel.ac.in/courses/Webcourse-contents/IIT-%20Guwahati/comp org arc/web/
- 3. William Stallings, "Computer Organization and Architecture: Designing for Performance", Eighth Edition, Pearson.
- 4. Computer architecture and organization , 4^{th} edition , P Chakraborty , JAICO publishers
- 5. http://www.srmuniv.ac.in/downloads/computer architecture.pdf
- 6. http://www.dauniv.ac.in/downloads/CArch PPTs/CompArchCh06L01PipeLine.pdf

Suggested list of student activities

Note: The following activities or similar activities for assessing CIE (IA) for 5 marks (Any one)

Student activity like mini-project, surveys, quizzes, etc. should be done in group of 3-5 students.

- 1. Each group should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course coordinator and programme co-ordinator
- 2. Each group should conduct different activity and no repeating should occur.

1	Conduct a survey on various types of processors available with their features and								
	submit a report.								
2	List out the features of 8086 microprocessor and 8051 micro controller with respect to architecture and working.								
3	Submit a report on hardware and software interrupts.								
4	A Case study on Moore's Law about the processors and submit a report.								
5	Conduct a survey on types of memories and also about the cost and speed of								
	various memories with comparison.								

Course Delivery

The course will be delivered through lectures and Power point presentations/ Video

Course Assessment and Evaluation Scheme

Method	What		То	When/Where	Max	Evidence	Course
			who	(Frequency in	Marks	collected	outcomes
			m	the course)			
	CIE	IA		Three IA tests (Average of			1 to 6
				three tests will	20	Blue books	
] t			ts	be computed)			
Direct Assessment			Students	Student activity	05	Report	1 to 6
t Asse			Š	Total	25		
)irec	SEE	End		End of the	100	Answer scripts	1 to 6
	G. 1	Exam		course		at BTE	1.2.2
	Student			Middle of the		7 11 1 0	1,2,3
	Feedbac	k on		course		Feedback forms	Delivery of
	course						course
	End of C	Course		End of the			1 to 6
ent	Survey		ints	course			Effectiveness
sm			Students				of Delivery
ses			Stı			Questionnaires	of
As						Questionnantes	instructions
ect							&
Indirect Assessment							Assessment
H	1 11 1		. 10		1 0	1 111	Methods

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off to the next higher digit.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	10
2	Understanding	50
3	Application	40

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- 1. Blue books (20 marks)
- 2. Student suggested activities report for 5 marks
- 3. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

FORMAT OF I A TEST OUESTION PAPER (CIE)

Test/Date and Time Semester/year Course/Course Code Max Marks										
Test/Date	and Time	Max Marks								
Ex: I test/6	5 th weak of	I/II SEM				20				
sem 10	0-11 Am	Year:			. 20					
Name of Co's:	Name of Course coordinator: Units: CO's:									
Question		Question		MARKS	CL	со	РО			
no		Question		WAKKS	CL	CO	Ю			
1										
2			·							
3										
4										

Note: Internal Choice may be given in each CO at the same cognitive level (CL).

MODEL QUESTION PAPER (CIE)

Test/Date and Time Semester/year		Course/Course Code	Max Marks
Ex: I test/6 th weak	III SEM	Computer Organization	20
of sem 10-11 AM	Year: 2015-16	Course code:15CS32T	_,

Name of Course coordinator:

Units:1,2 Co: 1,2

Note: Answer all questions

Questio n no	Question	CL	C O	РО
1	Describe the role of MAR, MDR, PC and IR. (5)	R	1	1,2
2	Explain the role of buffer registers (5)	R	1	1,2
3	Describe the Big-endian and Little-endian addressability (5)	U	2	1,2
4	Explain straight line sequencing OR Describe register and absolute addressing mode.	U	2	1,2

Format for Student Activity Assessment

DIMENSION	Unsatisfactory 1	Developing 2	Satisfactory 3	Good 4	Exemplary 5	Score
Collection of data	Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collects some basic information; refer to the topic	Collects relevant information; concerned to the topic	Collects a great deal of information; all refer to the topic	3
Fulfill team's roles & duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs all duties	Performs all duties of assigned team roles with presentation	4
Shares work equally	Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Does the assigned job without having to be reminded.	Always does the assigned work without having to be reminded and on given time frame	3
Listen to other Team mates	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Listens, but sometimes talk too much	Listens and contributes to the relevant topic	Listens and contributes precisely to the relevant topic and exhibit leadership qualities	3
					TOTAL	13/4=3.25=4

^{*}All student activities should be done in a group of 4-5 students with a team leader.

Diploma in Computer science & Engineering

III- Semester

Course Title: Computer Organization

Time: 3 Hours Max Marks: 100

PART-A

Answer any SIX questions. Each carries 5 marks.

5X6=30 Marks

- 1) Explain the basic functional unit of a Computer.
- 2) Describe register and absolute addressing mode.
- 3) Write a note on register transfers.
- 4) Explain the concept of micro programmed control.
- 5) Explain how to enable and disable an interrupt.
- 6) Explain the use of PCI bus in the computer system.
- 7) Explain the Double-data-rate SDRAM concept.
- 8) Explain the concept of flash drives.
- 9) Compare super scalar verses VLIW.

PART-B

Answer any <u>SEVEN</u> full questions each carries 10 marks.

10X7=70 Marks

- 1. Explain with examples one-address, two-address and three-address instruction types.
- 2. Describe program-controlled I/O operation.
- 3. Illustrate with diagram arithmetic and logic operation.
- 4. Describe the working of DMA.
- 5. Explain the serial port interface.
- 6. Explain the operation asynchronous DRAM.
- 7. Describe the features of PROM, EPROM and EEPROM.
- 8. Illustrate with diagram memory hierarchy with respect to speed, size and cost.
- 9. Explain CISC scalar and RISC scalar processor.
- 10. Describe Arithmetic, Instruction and processor pipelining.



MODEL QUESTION BANK

Diploma in Computer Science & Engineering

III Semester

Course Title: Computer Organization

CO	Question	CL	Marks			
	Explain the basic functional unit of a Computer.	R				
	Describe the role of MAR, MDR, PC and IR.	R				
Ι	Explain in brief the basic operation concept between processor and the memory.	R	05			
	Explain the significance of single bus structure.	R				
	Explain the role of buffer registers.	R				
	Explain byte addressability.	U				
	Describe the Big-endian and Little-endian addressability.	U				
	Explain the basic memory operation.	U				
	Explain straight line sequencing.	U	05			
	Write a note on conditional codes.	U				
	Describe register and absolute addressing mode.	U				
	Write a note on relative addressing.	U				
II	Explain with examples one-address, two-address and three-address instruction types.	U				
	Illustrate Branching concept with Example.	A				
	Illustrate with examples Indirect addressing.	A				
	Describe Indexed addressing with examples.	A	10			
	Explain different assembler directives. U					
	Explain the execution of assembly language program.	U				
	Describe program controlled I/O operation.	U				
	Explain the significance of auto-increment and auto-decrement addressing mode	U				
	Explain the different phases for instruction execution.	U				
	Write a note on register transfers.	U				
	Explain how a complete instruction is executed.	U	05			
	Write a note on Hardwired control unit.	U				
	Explain the concept of micro programmed control unit.	U				
III	Explain single bus organization.	U				
	Illustrate with diagram arithmetic and logic operation.	U				
	Describe fetching a word from memory.	U	10			
	Explain multiple bus organization.	U				
	With block diagram explain complete processor.	U				
	Explain the memory-mapped I/O concept.	U				
	Illustrate program controlled I/O.	U				
	Write a note on interrupts.	U				
	Explain how to enable and disable an interrupts.	U				
	Write a note on vectored interrupts.	U				
	Explain the exception concepts with respect to I/O.	U	05			

	Explain bus arbitration logic.	U	
	List the activities of an I/O interface.	U	
	Explain the use of PCI bus in the computer system.	A	
	Write a note on SCSI bus.	A	
IV	Explain the universal serial bus concept.	U	
	Illustrate with examples interrupt service routine.	A	
	Explain implementation of prioritized interrupts.	U	
	Describe the working of DMA.	U	10
	Explain synchronous and asynchronous bus.	U	
	Explain with example parallel port connectivity.	A	
	Explain serial port interface.	A	
	Illustrate how to implement a static RAM memory cell.	A	
	Illustrate how to implement CMOS memory.	A	
	Explain the Double-data-rate SDRAM concept.	U	
	Write a note on Ram bus memory.	U	05
	Explain the configuration of ROM cell.	U	
	Write a note on flash memory.	A	
	Explain the concept of flash drives.	A	
V	Explain the significance of cache memory.	U	
	Explain the internal organization of memory chips.	U	
	Explain the operation of asynchronous DRAM.	U	
	Explain the operation of synchronous DRAM.	U	
	Explain static and dynamic memory system.	U	10
	Explain the use of memory controller with diagram.	A	
	Describe types of ROM	A	
	Illustrate with diagram memory hierarchy with respect to speed, size and cost	U	
	Explain the working of cache memory operations.	U	
	Explain Architecture of RISC machine.	U	
	Compare CISC verses RISC.	U	
	Explain super scalar processor.	U	
	Compare super scalar verses VLIW.	U	05
	List advantages of multi core architecture.	U	
	List the applications of multi core architecture.	A	
VI	Explain Non-linear pipeline processor.	U	
	Explain VLIW Architecture.	U	
	Explain CISC scalar and RISC scalar processor .	U	
	With neat diagram explain Multi core architecture.	U	10
	Explain Asynchronous and synchronous model of linear pipeline processor.	U	
	Describe Arithmetic, Instruction and processor pipelining.	U	



Government of Karnataka Department of Technical Education Bengaluru

	Course Title: Database Management Systems							
	Scheme (L:T:P) : 4:0:0	Total Contact Hours: 52	Course Code: 15CS33T					
Data Management System	Type of Course: Lectures, Self Study & Student Activity	Credit :04	Core/ Elective: Core					
CIE- 25 Marl	KS	S	EE- 100 Marks					

Prerequisites

Knowledge of programming language.

Course Objectives

- 1. Understand database concepts, applications, data models, schemas and instances.
- 2. Implement the relational database design and data modelling using entity-relationship (ER) model.
- 3. Demonstrate the use of constraints and relational algebra operations.
- 4. Use of SQL in querying the database
- 5. Demonstrate Normalization process.
- 6. Learn the new emerging Technologies and Applications in database.

Course Outcome

On successful completion of the course, the students will be able to attain below Course Outcome (CO):

	Course outcome	CL	Linked PO	Teaching Hours
CO1	Identify the characteristics of database and describe the architecture and languages of Database system.	R, U	1,2,5,6,7,8,9,10	08
CO2	Identify the elements used in Entity-Relationship diagram and sketch a simple diagram.	U, A	1,2,3,4,5,6,7,8,9,10	08
CO3	Summarize relational model concept and illustrate the relational constraints.	U, A	1,2,3,4,5,6,7,8,9,10	08
CO4	Describe Structured Query Language (SQL) and apply to query a database.	A	1,2,3,4,5,6,7,8,9,10	10
CO5	Recognize and interpret normalization for relational databases.	U, A	1,2,3,4,5,6,7,8,9,10	08
CO6	Visualize the features of NOSql and identify the database applications.	A	1,2,3,4,5,6,7,8,9,10	10
		Total	sessions	52

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
Computer Organisation	3	3	3	3	3	3	3	3	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO. If \geq 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3 If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2 If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1 If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

Course Content and Blue Print of Marks for SEE

Unit No	Unit Name	Hour	_	estion e set f SEE		Marks Weightage	Marks Weightage (%)
			R	U	A	A	
I	Identify the characteristics of database and describe the architecture and languages of Database system.	08	10	12	1	22	15.38
II	Identify the elements used in Entity-Relationship diagram and sketch a simple diagram.	08	6	10	6	22	15.38
III	Summarize relational model concept and illustrate the relational constraints.	08	5	10	7	22	15.38
IV	Describe Structured Query Language (SQL) and apply to query a database.	10	-	5	25	30	19.24
V	Recognize and interpret normalization for relational databases.	08	-	24	1	24	15.38
VI	Visualize the features of NOSql and identify the database applications.	10	-	15	10	25	19.24
	Total	52	21	76	48	145	100

UNIT I: Databases and Data Base Users

08 Hrs

Introduction, An Example, Characteristics of the database approach, Actors on the scene, Workers behind the scene, Advantages of using the DBMS Approach, A Brief History of Database Applications, When Not to use a DBMS

Database System Concepts and Architecture - Data Models, Schemas, and Instances, Three-Schema Architecture and Data Independence, Database Languages and Interfaces, The Database System Environment, Centralized and Client /Server Architectures for DBMSs, Classification of database Management System.

UNIT II: Data Modelling Using the Entity-Relationship(ER) Model

08 Hrs

Using High-Level Conceptual Data Models for Database Design, An example Database Application, Entity Types, Entity Sets, attributes and keys, Relation Types, Relationship Sets, roles and structural constraints, Weak Entity Types, Refining the ER Design for the Company Database, ER Diagrams, naming, conventions and design issues, Relationship Types of Degree Higher Than Two.

UNIT III: Relational Data Model and Relational Data Base Constraints 08 Hrs

Relational Model concepts, Relational Model Constraints and relational database schemas, Update Operation, Transaction and Dealing with constraints violations.

UNIT IV: SQL: Schema Definition, constraints, queries and views 10 Hrs

SQL Data Definition and data types, Specifying constraints in SQL, Schema Change statement in SQL, Basic queries in SQL, More Complex SQL queries, INSERT, DELETE and UPDATE statements in SQL, Specifying constraints and Assertions and Triggers, Views(Virtual Tables) in SQL

UNIT V: Functional Dependencies and normalization for relational databases 08 Hrs

Informal Design guidelines for relation schemas, Functional dependencies, Normal forms based on primary keys, General Definition of second and third normal forms, Boyce-codd Normal form.

UNIT VI: Fundamentals of Data Base Transaction Processing 10 Hrs

Introduction to transaction processing, transaction and system concepts, desirable properties of transactions.

NoSQL – Introduction, Distributed Systems, Advantages & Disadvantages of Distributed Computing, Scalability, What is NoSQL? Why NoSQL? RDBMS vs. NoSQL, Brief history of NoSQL, CAP theorem (Brewer's Theorem), NoSQL pros/cons, NoSQL Categories, Production deployment.

Text books

- 1. Fundamentals of Database Systems, **Sixth** edition, 2014, Ramez Elmasri, Shamkan B. Navathe, Pearson Education, ISBN- 9788131792476
- 2. http://www.w3resource.com/mongodb/nosql.php --for NoSQL UNIT VI

References

- 1. Fundamentals of Database Management Systems, Mark L. Gillenson, 2009, Wiley India
- 2. Database Management Systems Raghu Ramakrishnan and Johannes Gehrke 3rd Edition, McGraw-Hill, 2003
- 3. DBMS a practical approach, by E R Rajiv Chopra, S Chand publications.
- 4. http://elearning.vtu.ac.in/10CS54.html
- 5. http://www.tutorialspoint.com/dbms/
- 6. http://www.indiabix.com/technical/dbms-basics/
- 7. http://beginner-sql-tutorial.com/sql.htm

Suggested list of student activities

Note: The following activities or similar activities for assessing CIE (IA) for 5 marks (Any one) Student activity like mini-project, surveys, quizzes, etc. should be done in group of 3-5 students.

CS&E

- 1. Each group should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course coordinator and programme co-ordinator
- 2. Each group should conduct different activity and no repeating should occur.

1	Identify and do a case study on relationship types of degree higher than two in ER
	data modelling
2	Design E-R diagrams for the following databases with all constraints specifications.
	a) Hospital Management b) Hotel Management c) Student Database
3	Conduct a survey on various applications of database and submit a report of 3 to 4
	pages.
4	Conduct a case study on any one Online Transaction Processing System (OLTP)
	and submit a report of 3 to 4 pages. Ex: Online Banking, Online Reservation (Bus,
	Train, Airlines)

Course Delivery

The course will be delivered through Lectures and Power point presentations/ Video

Course Assessment and Evaluation Scheme

Method	What		To who	When/Where (Frequency in	Max Marks	Evidence collected	Course outcomes
ıt	CIE	IA	m ts	Three IA tests (Average of three tests will be computed)	20	Blue books	1 to 6
Direct Assessment			Students	Student activities	05	Report	1 to 6
t Asse			Š	Total	25		
Direc	SEE	End Exam		End of the course	100	Answer scripts at BTE	1 to 6
	Student Feedback on course End of Course Survey		Š	Middle of the course		Feedback forms	1,2,3 Delivery of course
Indirect Assessment			Students	End of the course		Questionnaires	1 to 6 Effectiveness of Delivery of instructions & Assessment Methods

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off

to the next higher digit.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	15
2	Understanding	50
3	Application	35

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- 1. Blue books (20 marks)
- 2. Student suggested activities report for 5 marks
- 3. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

FORMAT OF I A TEST QUESTION PAPER (CIE)

	FORMAT OF TA TEST QUESTION TATER (CIE)						
Test/Date	Test/Date and Time Semester/year Course/Course Code		Ma	ks			
Ex: I test/6 th weak of		I/II SEM				20	
sem 10	0-11 Am	Year:					
Name of C CO's:	Name of Course coordinator: Units: CO's:						
Question		Question		MARKS	CL	со	РО
no		Question		WAKKS	CL	CO	PU
1							
2							
3							
4							

Note: Internal choice may be given in each CO at the same cognitive level (CL).

MODEL QUESTION PAPER (CIE)

Test/Date and Time	Semester/year	Course/Course Code	Max Marks
Ex: I test/6 th week	III SEM	Data Base Management Systems	20

of sem 10-11 AM Year: 2015-16 Course code:15CS33T

Name of Course coordinator:

Units:1,2 Co: 1,2

Note: Answer all questions

Questio n no	Question	CL	C O	PO
1	Define the following. (5) 1. Data Model 2. Database Schema/Intension 3. Database State/Extension 4. Data Sublanguage 5. DML.	R	1	1,2
2	Define data independence and explain different types of it. (5)	R	1	1,2
3	Explain the different cardinality ratios for binary relationship types. (5)	U	2	1,2
4	Explain with suitable examples 1:1 and M:N relationship types. (5) OR Develop an E-R diagram for a company database.	A	2	1,2

Format for Student Activity Assessment

DIMENSION	Unsatisfactory	Developing	Satisfactory	Good	Exemplary	Score
	1	2	3	4	5	

Collect da		Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collects some basic information; refer to the topic	Collects relevant information; concerned to the topic	Collects a great deal of information; all refer to the topic	3
Fulfill troles &		Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs all duties	Performs all duties of assigned team roles with presentation	4
Shares equa		Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Does the assigned job without having to be reminded.	Always does the assigned work without having to be reminded and on given time frame	3
Liste other ma	Team	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Listens, but sometimes talk too much	Listens and contributes to the relevant topic	Listens and contributes precisely to the relevant topic and exhibit leadership qualities	3
						TOTAL	13/4=3.25=4

^{*}All student activities should be done in a group of 4-5 students with a team leader.

MODEL QUESTION PAPER

Diploma in Computer science & Engineering III- Semester

Course Title: Data Base Management Systems

Time: 3 Hours Max Marks: 100

Code: **15CS33T**

PART-A

Answer any SIX questions. Each carries 5 marks.

5X6=30 Marks

- 1. What is database? List the important characteristics of database approach.
- **2.** Explain with examples Entity Integrity Constraints and referential Integrity Constraint.
- **3.** Explain the characteristics of Relations.
- 4. With examples write a note on CREATE and DROP command.
- 5. Differentiate Having and Where clause with example.
- **6.** Explain the Boyce-Codd normal form with example.
- 7. Explain the generation of spurious tuples and how to overcome the same.
- 8. Discuss the advantages of NoSql versus RDBMS.
- 9. What is scaling. Explain the types of scaling.

PART-B

Answer any SEVEN full questions each carries 10 marks.

10X7=70 Marks

- 1. Discuss the advantages of DBMS Approach.
- 2. Define the following.
 - a) Data Model b) Database Schema/Intension c) Database State/Extension
 - d) Data Sublanguage. e) DML.
- 3. With a neat diagram explain the different phases of database design.
- 4. Identify the entities, relationships and develop an E-R diagram for a company database.
- 5. Explain with example the different Constraints that are violated during UPDATE and DELETE operations
- 6. Consider the following schema & write the SQL queries.

SAILORS (sid, sname, rating, age)

BOATS (bid, bname, color)

RESERVES (sid, bid, day)

- a. Retrieve names of sailors who reserved green boat.
- b. Retrieve the colors of boats reserved by 'ramesh'.
- c. Retrieve the names of sailors who have reserved a red or a green boat.
- d. Retrieve the sid of sailors with age over 20 who have not reserved a red boat.
- e. Retrieve the names of sailors who have reserved all boats called 'Interlake'.
- 7. List and explain the different data types used in SQL.
- 8. Discuss the informal design guidelines for relational schema.
- 9. Draw a state diagram and discuss the typical states during transaction execution.
- 10. Explain the need for concurrency control.



MODEL QUESTION BANK

Diploma in Computer Science & Engineering

III Semester

Course Title: Data Base Management Systems

CO	Question	CL	Marks
----	----------	----	-------

	What is database? List the important characteristics of database	R	
	approach. What do you mean by data model? List and explain the different	R	
	types of data model.	**	
	What is Data Independence? Differentiate between logical & physical Data Independence.	U	
	Define the following.	R	
	1. Data Model 2. Database Schema/Intension 3. Database		05
	State/Extension 4. Data Sublanguage 5. DML. Explain the functions of database administrators and database	U	05
	designers.	C	
	Briefly explain the different types of End Users.	U	
	Define data independence and explain different types of it.	U	
Ι	List the various DBMS languages and explain each.	R	
	List the various DBMS interfaces and explain each.	R	
	Explain the functions of different Database utilities. Explain the important characteristics of database approach.	U U	
	Explain the important characteristics of database approach. Explain the actors on the scene and workers behind the scene.	U	
	Discuss the advantages of DBMS Approach.	U	
	Explain the two-tier client/server architecture for DBMS with neat	U	10
	diagram.		
	Explain the DBMS components modules with neat diagram. Write a note on classification of DBMS.	U	
	What is E-R diagram? List out the notations used for E-R diagram.	U R	
	Explain the different cardinality ratios for binary relationship types.	U	
	Differentiate between a) an attribute and value set	U	5
	b) stored and derived attributes.		
	Explain the structural constraints of relationship type.	U	
	Explain with suitable examples 1:1 and M:N relationship types. With a neat diagram explain the different phases of database design.	A	
	What is a Weak entity type, explain with an example how the entities	U	
П	are identified in a Weak entity.	C	
	Define the following term with examples:-	R	
	a) Entity b) Entity set c) Multi-valued attribute d) Composite attribute e)Derived attribute		10
	Identify the entities, relationships and develop an E-R diagram for a	A	10
	company database.		
	Identify the entities, relationships and develop an E-R diagram for a Hospital database.	A	
	Compare entity integrity and referential integrity constraints.	U	
	Classify the constraints on databases and give examples for each of	U	
	them. Explain the characteristics of Relations.	U	5
	Explain the characteristics of Relations. Explain with examples Entity Integrity Constraints and referential	A	
III	Integrity Constraint	1 N	
	Differentiate i) Key and super Key ii) degree and cardinality	U	
	Define the following term with examples:-	R	

	a) Domain b) Attribute c) Tuple d) Relation schema (R) e) Relation (r)		10
	Explain the insert, delete and update operation with examples.	A	10
	Explain with example the different constraints that are violated	U	
	during UPDATE and DELETE operations		
	Write a note on different data types supported by SQL.	R	
	Write the general syntax of specifying Check constraint and default	R	
	constraint while creating a table.	A	
	Differentiate Having and Where clause with example.	A	
	Write a note on aggregate functions in SQL.	U	_
	Discuss the strategies for View Implementation.	U	5
	With examples write a note on CREATE and DROP command.	A	
	Define view. How to create it? Give example.	U,A	
	Explain UPDATE and ALTER command with example.	U,A	
	Write a note on basic queries in SQL.	U	
IV	Explain the different schema change statements in SQL with example.	A	
	List and explain the different data types used in SQL.	U	
	Explain different constraints available in SQL with example.	U	
	List and explain the different aggregate functions available in SQL	A	
	with example.	A	
	Explain the following with examples: a) Insert b) Delete c) Distinct d) Order by e) Where		
	Explain the following Operators with examples:	A	
	a) ANY b) ALL c) IN d) LIKE e) BETWEEN		10
	Consider the following schema & write the SQL queries.	A	
	SAILORS (sid, sname, rating, age)		
	BOATS (bid, bname, color)		
	RESERVES (sid, bid, day) a) Retrieve names of sailors who reserved green boat.		
	b) Retrieve the colors of boats reserved by 'ramesh'.		
	c) Retrieve the names of sailors who have reserved a red or a		
	green boat.		
	d) Retrieve the sid of sailors with age over 20 who have not		
	reserved a red boat.		
	e) Retrieve the names of sailors who have reserved all boats called 'Interlake'.		
	And Similar databases to be considered with different set of queries.	U	
	Explain the generation of spurious tuples and how to overcome the same.	U	
	Differentiate between	U	
	i) prime attribute and non prime attribute		
	ii) Full functional dependencies and partial dependencies with		5
	examples.	W T	3
	Explain the functional dependencies with examples.	U	
V	Explain second normal form with an example.	U	
· ·	Explain third normal form with an example.	U	

	Explain the Boyce-Codd normal form with example.	U	
	Explain the different UPDATE anomalies of tables.	U	
	Discuss the informal design guidelines for relational schema.	U	10
	What is normalization? Explain the different types of normal forms	U	
	with examples.		
	Explain the following terms: transaction, concurrency control.	U	
	Explain the desirable properties of a transaction.	U	
	Write a note on System Log.	U	
	Write a note on commit point of a transaction.	U	
	Discuss the advantages of NoSql versus RDBMS.	U	5
	Explain CAP theorem.	U	
VI	Explain the advantages of distributed computing.	U	
	What is scaling. Explain the types of scaling.	U	
	Differentiate between ACID and BASE.	U	
	Bring out the advantages and disadvantages of Nosql.	U	
	Draw a state diagram and discuss the typical states during transaction execution.	A	
	Discuss the different types of failures that occur during transaction execution.	A	10
	Explain the need for concurrency control.	A	
	Explain the categories of NoSql.	U	
	Explain Column store and Row store with suitable examples.	A	



Government of Karnataka Department of Technical Education Bengaluru

A TOP OF THE PROPERTY OF THE P	Course Title	: Computer Network		
	Scheme (L:T:P) : 4:0:0	Total Contact Hours: 52	Course Code: 15CS34T	
N BI	Type of Course: Lectures, Self Study & Student Activity.	Credit :04	Core/ Elective: Core	
CIE- 25 Marks			SEE- 100 Marks	

Prerequisites

Basic Knowledge of Computers and Communication

Course Objectives:

- 1. Discuss basic concepts, the need, and the various components in Networking
- 2. Learn the types of network topologies used in a network.
- 3. Discuss the importance of LAN components, protocols and addressing schemes.
- 4. Learn the basic concepts of WAN connectivity and its devices.

Course Outcome

On successful completion of the course, the students will be able to attain below Course Outcome (CO):

	Course outcome	CL	Linked PO	Teaching Hours
CO1	Define various data communication components in networking.	R, U	1,2,10	06
CO2	Describe networking with reference to different types of models and topologies.	R, U	1,2,10	06
CO3	Summarize the concepts related to error detection, correction and error control techniques.	R, U	2,3,4,5,10	08
CO4	Recognize the importance of LAN components, protocols that enable multiple computers to communicate with one another.	U, A	2,3,4,8,10	14
CO5	Identify the features of the different IP address classes.	R, A	2,3,4,10	06
CO6	Explain different connectivity and devices related to WAN.	U, A	2,3,4,5,8,10	12
		Total	sessions	52

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
Computer Network	3	3	2	2	2	-	-	2	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO. If \geq 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3 If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2 If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1 If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

Course Content and Blue Print of Marks for SEE

Unit No	Unit Name	Hour	Questions to be set for SEE			Marks Weightage	Marks Weightage (%)
		R	U	A	A		
Ι	Introduction to Data Communication	06	05	11	1	16	11.53
II	Introduction to Networking and Topologies	06	ı	08	08	16	11.53
III	Error Detection and Error Correction	08	-	13	10	23	15.38
IV	LAN Components and Protocols	14	-	15	25	40	27
V	Network Addressing	06	-	16	-	16	11.53
VI	Wide Area Networks	12		15	19	34	23.03
	Total	52	05	78	62	145	100

UNIT I: Introduction to Data Communication

06 Hrs

Data communication: Components, Data representation, Data flow, Networks – Categories of networks, Internetwork – Internet and Protocols, Analog and Digital Signals, Periodic and Non-Periodic Signals, Sine Wave, Phase, Wavelength, Digital Signals, Bit-rate, Bit-length, Transmission Impairment – Attenuation, Distortion and Noise, Performance - Bandwidth, Throughput, Latency, Jitter (Basic concepts only). Transmission Modes – Parallel and Serial Transmission, Asynchronous and Synchronous Transmission

UNIT II: Introduction to Networking and Topologies

06 Hrs

Overview of Networking, Need for Networking, Hardware and Software components, Network Communication Standards, OSI Reference Model, TCP/IP Model, Overview of network topologies, Basic topologies- bus, ring, star, mesh and hybrid

UNIT III: Error Detection and Correction

08 Hrs

Introduction, Types of Errors, Redundancy, Detection versus Correction, Forward Error Correction versus Retransmission, Coding, Block Coding, Error Detection, Error Correction, Cyclic Codes, Cyclic Redundancy Check, Polynomials, Advantages of Cyclic Codes, Flow Control, Error Control, Multiple Access - CSMA, CSMA/CD, Controlled Access - Reservation, Polling, Token Passing

LAN Cables – Co-axial, twisted pair, optical fibre, LAN connectors- co-axial cable, and twisted pair cable, optical fibre, LAN devices – repeaters, hubs, switches, NIC, WLANs. Lower Layer Protocols - ARCnet, Ethernet, Ethernet Communication, Fast Ethernet, Gigabit Ethernet, Token Ring, Token Ring Frame format, Fault Management and tolerance, FDDI, Middle Layer Protocols- TCP/IP, Higher Layer Protocols- HTTP,FTP, SMTP, IMAP.

UNIT V: Network Addressing

06 Hrs

Introduction, TCP/IP addressing scheme- Components of IP addressing, IP address classes, Limitations of IP address classes, IP subnetting - Creating subnets in networks, Communication across subnets, Subnetting Considerations, Subnetting Limitations, IPv6.

UNIT VI: Wide Area Networks

12 Hrs

Overview, WAN Connectivity- POTS, Leased Lines, ISDN-Features and Working, VSAT-Devices, Networks, Architecture, Access Technologies, Microwave, Radio, Infrared, VPNs-Working of VPN, Protocols-PPTP,L2TP,IPSec.

WAN Devices – Bridges -Transparent and Source Routing, Routers –Routing Mechanics, Routing Table, Routing Protocols – RIP,OSPF, Gateways, WAN Protocols-PPP,X.25,FrameRelay and ATM ,Internet Tools and Services- Domain Name System , Windows Internet Naming Service, Dynamic Host Configuration Protocol.

Text Books

- 1. Data Communications and Networking Behrouz A Forouzan, Tata McGraw-Hill, 5th edition, ISBN: 9780070634145 for *Unit I and III*.
- 2. Basics of Networking, PHI learning Pvt. Ltd. 2013, ISBN: 978-81-203-2489 for *Unit II, IV, V and VI*.

References

- 1. http://www.tutorialspoint.com/data communication computer network/index.htm
- 2. http://www.e-tutes.com/lesson1/networking fundamentals lesson1 1.htm
- 3. http://www.techiwarehouse.com/engine/d9e99072/Basic-Networking-Tutorial
- 4. http://www.nptel.com
- 5. http://www.w3schools.com/

Suggested list of student activities

Note: The following activities or similar activities for assessing CIE (IA) for 5 marks (Any one) Student activity like mini-project, surveys, quizzes, etc. should be done in group of 3-5 students.

- 1. Each group should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course coordinator and programme co-ordinator
- 2. Each group should conduct different activity and no repeating should occur.
 - Prepare a report on Significance of computer networks and its evolution specifying its advantages and disadvantages of computer networking

2	Prepare a presentation on Sending Email via Telnet
3	Prepare a report on File sharing between computers using LAN connectivity
4	Prepare a report on Setting up a Wireless LAN
5	Prepare a report on Securing a Wireless LAN
6	Prepare a presentation on use of ping program to test your own computer

Course Delivery

The course will be delivered through lectures and Power point presentations/ Video

Course Assessment and Evaluation Scheme

Method	What		To who m	When/Where Max (Frequency in the course)		Evidence collected	Course outcomes
ent	CIE IA		ts	Three IA tests (Average of three tests will be computed)	20	Blue books	1 to 6
Direct Assessment			Students	Student activities	05	Activity Reports	1 to 6
ct As			S	Total	25		
Direc	SEE	End Exam		End of the course	100	Answer scripts at BTE	1 to 6
nent	Student Feedback on course End of Course Survey			Middle of the course		Feedback forms	1,2,3 Delivery of course
Indirect Assessment			Students	End of the course		Questionnaires	1 to 6 Effectiveness of Delivery of instructions & Assessment Methods

Note: I.A. test shall be conducted for 20 marks. Average marks of three tests shall be rounded off

to the next higher digit.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	20
2	Understanding	45
3	Application	35

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- 1. Blue books (20 marks)
- 2. Student suggested activities report for 5 marks
- 3. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

FORMAT OF I A TEST OUESTION PAPER (CIE)

TORMAT OF TA TEST QUESTION TATER (CIE)									
Test/Date	Date and Time Semester/year Course/Course Code					Max Marks			
Ex: I test/6 th weak of sem 10-11 Am		I/II SEM			20				
		Year:							
	Name of Course coordinator: Units: CO's:								
Question		Question		MARKS	CI	60	DO.		
no		Question		MAKKS	CL	СО	РО		
1									
2									
3									
4									

Note: Internal choice may be given in each CO at the same cognitive level (CL).

MODEL QUESTION PAPER (CIE)

Test/Date and Time	Semester/year	Course/Course Code	Max Marks
Ex: I test/6 th week	III SEM	Computer Networks	20
of sem 10-11 AM	Year: 2015-16	Course code:15CS34T	

Name of Course coordinator:

Units:1,2 Co: 1,2

Note: Answer all questions

Questio n no	Question	CL	C O	РО
1	Define the following terms – (5)	R	1	1,2
	a. Data communication.			
	b. Phase.			
	c. Wavelength.			
	d. Bandwidth.			
	e. Throughput.			
2	Discuss different forms of data representation (5)	U	1	1,2
	OR			
	Explain briefly the components of Data communication, with a diagram			
3	Explain the need for networking. (5)	A	2	1,2
4	Explain TCP/IP reference model. (5)	U	2	1,2

Format for Student Activity Assessment

DIMENSION	Unsatisfactory 1	Developing 2	Satisfactory 3	Good 4	Exemplary 5	Score
Collection of data	Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collects some basic information; refer to the topic	Collects relevant information; concerned to the topic	Collects a great deal of information; all refer to the topic	3
Fulfill team's roles & duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs all duties	Performs all duties of assigned team roles with presentation	4
Shares work equally	Always relies on others to do the work	n others to do the assigned does th		Does the assigned job does the without assigned having to be reminded. without having to be reminded and on given time frame		3
Listen to other Team mates	talking; never does most		Listens, but sometimes talk too much	Listens and contributes to the relevant topic	Listens and contributes precisely to the relevant topic and exhibit leadership qualities	3
					TOTAL	13/4=3.25=4

^{*}All student activities should be done in a group of 4-5 students with a team leader.

MODEL OUESTION PAPER

Code: **15CS34T**

Diploma in Computer science & Engineering

III- Semester

Course Title: COMPUTER NETWORK

Time: 3 Hours Max Marks: 100

PART-A

Answer any SIX questions. Each carries 5 marks.

5X6=30 Marks

- 1) Define the following terms
 - a. Data communication.
 - b. Phase.
 - c. Wavelength.
 - d. Bandwidth.
 - e. Throughput.
- 2) Explain the functions of physical and data link layers of OSI model.
- 3) Illustrate block coding with example.
- 4) Mention some standard CRC Polynomials.
- 5) Write a note on optical fibre cable.
- 6) Explain broadcasting in Ethernet network.
- 7) Discuss different subnetting considerations.
- 8) Describe the content of Routing table.
- 9) Explain the working of ISDN.

.

PART-B

Answer any SEVEN full questions each carries 10 marks.

10X7=70 Marks

- 1. Explain briefly the components of Data communication with diagram.
- 2. Explain OSI reference model with neat diagram.
- 3. Explain with an example design of CRC encoder and decoder.
- 4. List and explain coaxial twisted pair and optical fibre connectors.
- 5. Illustrate with diagram media access in Token Ring.
- 6. Compare SMTP verses POP.
- 7. Explain the features of IP address classes.
- 8. Describe VSAT network architecture and access technologies.
- 9. Explain briefly transparent bridge.
- 10. Explain ATM reference model with diagram.



MODEL QUESTION BANK

Diploma in Computer Science & Engineering

III Semester

Course Title: Computer Network

CO	Question	CL	Marks
	Define the following terms –	R	
	a. Data communication.		
	b. Phase.		
	c. Wavelength.		
	d. Bandwidth.		
	e. Throughput.		
	Define the following terms –	R	
	f. Periodic signal.		
	g. Non-periodic signal.		05
	h. Latency.		
	i. Jitter.		
	j. Bit rate.	-	
I	Illustrate different types of data flow.	R	
	Explain briefly the components of Data communication, with a diagram.	R	
	Discuss different forms of data representation.	U	
	Mention and explain the fundamental characteristics of data	U	
	communication system.	TT	
	Explain the different categories of networks.	U	
	Explain briefly the components of Data communication, with a diagram. Mention and explain the fundamental characteristics of data	U	
		U	
	communication system.	TT	10
	Explain the different categories of networks. Explain the need for networking.	U A	
	Explain the function of physical and data link layers of OSI model.	U	
	Explain the function of presentation and application layers of OSI	U	
	model.		
	Explain the function of Transport layer and Session layers of OSI	U	_
	model.		5
	Explain TCP/IP reference model.	U	
	List different network topologies. Explain with a diagram Ring	A	
	Topology.		
II	Classify types of hardware and software network components.	A	
	Explain OSI reference model with neat diagram.	U	
	Compare OSI and TCP/IP Reference Models.	U	10
	Compare Bus and Star Topologies with diagram.	A	
	Compare Mesh and Hybrid Topologies with diagram.	A	
	Explain the terms –	U	
	a. Error detection.		
	b. Error correction.		
	c. Redundancy.		
	d. Forward error correction.		
	e. Re-transmission.	T T	
	Illustrate with examples different types of errors.	U	5
	Illustrate block coding with example.	A	3

	Mention some standard CRC Polynomials.	U	
	Discuss the advantages of Cyclic Codes.	A	
	Explain briefly CSMA protocol.	U	
Ш	Write a note on CSMA/CD.	A	
	Explain with a diagram and an example, the process of error detection using block coding method.	A	
	With a diagram and an example, explain the structure of encoder and decoder in error correction.	A	
	Illustrate with a block diagram process of error detection in block coding.	A	10
	Explain the design of CRC encoder and decoder, with an example.	A	
	With an example, explain CRC division with polynomials.	A	
	Discuss Controlled Access methods.	U	
	Describe the important factors to be considered when transmitting signal	U	
	between two computers.		
	Explain coaxial cable with a diagram.	A	
	Write a note on optical fibre cable.	A	
	Explain multimode transmission of optical fibre.	U	
	Explain single mode transmission of optical fibre.	U	
	Describe the role of switches.	A	
	Explain the role of NIC.	A	
	List the benefits of WLAN verses Conventional LAN.	A	5
	List and explain the uses of WLAN.	A	
	List the disadvantages of ARCNet.	A	
IV	Explain ARCNet data frame format.	U	
- 1	Explain broadcasting in an Ethernet network.	A	
	Explain the features of Fast Ethernet.	A	
	Explain TCP/IP middle layer protocol.	A	
	Describe SMTP protocol.	A	
	Write a note on IMAP.	A	
	Explain different types of twisted pair cable with advantages and disadvantages.	A	
	List and explain coaxial, twisted pair and optical fibre connectors.	A	
	Explain with a diagram Repeaters and Hubs.	A	
	Describe Wireless LAN with a diagram.	A	
	Illustrate with a neat diagram media access in Ethernet.	A	10
	Describe the Token Ring Data frame format.	U	10
	Illustrate with a diagram media access in Token Ring.	A	
	Explain FDDI Lower layer protocol.	A	
	Explain HTTP and FTP Higher layer protocols.	A	
	Compare SMTP verses POP.	A	
	Explain the components of an IP address.	U	
	Explain the limitation of IP address classes.	U	5
	Discuss different sub netting considerations.	U	
\mathbf{V}	Explain the limitations of sub netting.	U	
	Explain the features of IP address of classes.	U	
	Explain the process of dividing a network into subnets.	U	10
	Explain communication across subnets with examples.	U	
	Differentiate between LAN and WAN technologies.	U	
	Explain the features of POTS.	U	

	Explain the advantages and disadvantages of Leased lines.	A					
	Explain the working of ISDN.	U					
	Describe the components of VSAT network. Identify and explain the different factors to be considered to access						
	Identify and explain the different factors to be considered to access						
	charges in WAN connectivity.						
	List the features of microwave connectivity.						
	Describe the content of Routing table.						
	Differentiate between Node-based Routing and Router-based Routing.	A					
	Explain briefly Routing Protocols.	U					
	Discuss frame relay protocol.	A					
VI	Illustrate the working of VPN with a neat diagram.	A					
	Describe VSAT network architecture and Access technologies.	A					
	Compare the features of Radio and Infrared waves.	U					
	Compare PPTP and IPSec.	U					
	Explain briefly transparent bridge.	U					
	Explain briefly Source Route Bridge.	U					
	Describe different type of Gateways.	A	10				
	Discuss PPP and X.25 Protocol.	U	10				
	Explain ATM reference model with a diagram.	A					
	Illustrate the working of DNS with a diagram.	A					
	Illustrate the working of WINS with a diagram.	A					
	Illustrate the working of DHCP with a diagram.	Α					



Government of Karnataka Department of Technical Education Bengaluru

The second second	Course Title:	Programming with C la	b	
The second secon	Scheme (L:T:P) : 0:2:4	Total Contact Hours: 78	Course Code: 15CS35P	
Programming Language	Type of Course: Tutorial and	Credit :03	Core/ Elective:	
	Practical's		Core	
CIE- 25 Mar	ks		SEE- 50 Marks	

Prerequisites

Knowledge of Computer Operation.

Course Objectives

- 1. Apply the specification of syntax rules for numerical constants and variables, data types.
- 2. Usage of Arithmetic operator, Conditional operator, logical operator and relational operators and other C constructs.
- 3. Write C programs using decision making, branching and loop constructs.
- 4. Apply and Write C programs to implement one dimensional and two dimensional arrays.
- 5. Writing programs using functions.

Course Outcome

On successful completion of the course, the students will be able to attain CO:

	Course Outcome	Experiment linked	CL	Linked PO	Teaching Hrs
CO1	Demonstrate branching statements	1 to 3	A	1 to 10	12
CO2	Demonstrate looping statements	4 to 7	A	1 to 10	18
CO3	Experiment on functions	8 & 9	A	1 to 10	12
CO4	Construct programs on arrays	10 to 12	A	1 to 10	18
CO5	Solve programs on structures	13 & 14		1 to 10	12
CO6	Write program on Preprocessor directive #define	15	A	1 to 10	06
			Total	78	

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course	Programme Outcomes									
	1	2	3	4	5	6	7	8	9	10
Programming with C lab	3	3	3	3	3	3	3	3	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO. If \geq 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3 If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2 If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1 If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

List of Graded Practical Exercises

Sl.No	Practical/Exercise
1	WAP to swap the values of two variables without using third variable.
2	WAP to find the largest/smallest of 3 numbers (if-else).
3	WAP to calculate the roots of a quadratic equation (using switch).
4	WAP to sum & reverse a given integer (while loop).
5	WAP to detect the Armstrong numbers in three digits from 100 to 999.
	(do-while).
6	WAP to check whether the given number is prime or not (for loop).
7	WAP to find the number of and sum of all integers greater than 100 and less than
	200 that are divisible by 7 for loop).
8	WAP to calculate factorial of a given number using function.
9	WAP to find GCD of two numbers using function
10	WAP to search for a given number in an array
11	WAP to find the transpose of a given matrix
12	WAP to addition two matrices
13	WAP to create a structure with employee details and display the same
14	WAP to process student structure containing roll number, class and age as members.
	The program must read 5 student record in an array of structure and display the
	details of a student who is eldest. Use a function to find the eldest for which array of
	structure is an argument.
15	WAP to demonstrate # define function.

Reference

Programming with ANSI-C, E. Balaguruswamy, Sixth Edition, Tata Mcgraw Hill.

Suggested list of student activities

Note: the following activities or similar activities for assessing CIE (IA) for 5 marks (Any one) Student activity like mini-project, surveys, quizzes, etc. should be done in group of 3-5 students.

- 1. Each group should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course co-ordinator and programme co-ordinator.
- 2. Each group should conduct different activity and no repeating should occur.
 - Customer billing System Project, Cricket Score Board Project, Calendar,
 Application Project, Employee Record System Project, Student Record

System Project, Cyber Management System Project, College billing System Project, Customer billing system, Phone book application, etc.

Course Delivery

The course will be delivered through Demonstration and Practices

Course Assessment and Evaluation Scheme

Method	What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
		IA	Students	Two tests (average of two tests)	10	Blue books	1,2,3,4,5
ent	CIE (Continuous			Record	10	Record	1,2,3,4,5
Direct Assessment	Internal Evaluation)			Student activity.	05	Report.	
)irect				Total	25		
	SEE (Semester End Examination)	End Exam		End of the course	50	Answer scripts at BTE	1,2,3,4,5
ant	Student Feedback on course End of Course Survey		Students	Middle of the course		Feedback forms	1,2,3 Delivery of course
Indirect Assessment				End of the course		Questionnaires	1,2,3, 4 & 5 Effectiveness of Delivery of instructions & Assessment Methods

^{*}CIE – Continuous Internal Evaluation

Note:

- 1. I.A. test shall be conducted as per SEE scheme of valuation. However obtained marks shall be reduced to 10 marks. Average marks of two tests shall be rounded off to the next higher digit.
- 2. Rubrics to be devised appropriately by the concerned faculty to assess Student activities.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	10
2	Understanding	20
3	Application	70

^{*}SEE – Semester End Examination

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- 1. Blue books (10 marks)
- 2. Record (10 marks)
- 3. Student suggested activities report for 5 marks
- 4. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

Format for Student Activity Assessment

Collection of data Does not collect any information relating to the topic Tulfill team's roles & duties	DIMENSION	Unsatisfactory 1	Developing 2	Satisfactory 3	Good 4	Exemplary 5	Score
roles & duties perform any duties assigned to the team role Shares work equally Always relies on others to do the work reminding Listen to other Team mates Is always talking; never allows anyone else to speak Parely does the assigned work; often needs reminded and on given time frame Listen to other Team mates Always relies on others to do the work Parely does the assigned work; rarely needs reminding Listen to other Team mates Always relies on others to do the assigned work; rarely needs reminding Listen to other Team mates Always does the assigned without work; rarely needs reminded. Listens, but sometimes talk too much relevant topic Listens and contributes to the precisely to relevant topic and Always does the assigned without having to be reminded. Listens and contributes to the precisely to relevant topic and		collect any information relating to the	very limited information; some relate	some basic information; refer to the	relevant information; concerned	great deal of information; all refer to	3
on others to do the work often needs reminding reminding mates Is always talking; never allows anyone else to speak on the work often needs reminding to the assigned work; rarely needs reminding of the assigned without having to be reminded. Listen to other Team mates Is always talking; never allows anyone else to speak of the talk too much rarely of the talk too much rarely of the talk too relevant topic to the relevant topic and on the relevant topic of the topic and on the relevant topic of the topic and on the relevant topic of the topic and on the relevant topic on the relevant t		perform any duties assigned to the team	very little	nearly all		duties of assigned team roles with	4
other Team matestalking; never allows anyone else to speakdoes most of the talking; rarelysometimes talk too muchcontributes to the relevant topiccontributes to the relevant topic and		on others to do	the assigned work; often needs	does the assigned work; rarely needs	assigned job without having to be	does the assigned work without having to be reminded and on given time	3
others to leadership speak qualities	other Team	talking; never allows anyone	does most of the talking; rarely allows others to	sometimes talk too	contributes to the relevant	contributes precisely to the relevant topic and exhibit leadership	3

*All student activities should be done in a group of 4-5 students with a team leader.

Directorate Of Technical Education

Scheme of Valuation for End Examination

1	Writing two programs	10+10=20
2	Executing any one program with result	20
3	Viva Voice	10
	Total	50

^{**}Evaluation should be based on the screen output only. No hard copy required.

Resource requirements for Programming with C Lab

(For an Intake of 60 Students [3 Batches])

Sl. No.	Equipment	Quantity
1	PC systems (latest configurations with speakers)	20
2	Laser Printers	01
3	Networking (Structured) with CAT 6e / wireless	03
	24 Port switches / Wireless Router	
	I/O Boxes for networking(as required)	
4	Broad Band Connection	01

^{**}Open Source Software should be encouraged

MODEL QUESTION BANK

1	WAP to swap the values of two variables without using third variable.
2	WAP to find the largest/smallest of 3 numbers (if-else).
3	WAP to calculate the roots of a quadratic equation (using switch).
4	WAP to sum & reverse a given integer (while loop).
5	WAP to detect the Armstrong numbers in three digits from 100 to 999.
	(do-while).
6	WAP to check whether the given number is prime or not (for loop).
7	WAP to find the number of and sum of all integers greater than 100 and less than 200
	that are divisible by 7 for loop).
8	WAP to calculate factorial of a given number using function.
9	WAP to find GCD of two numbers using function
10	WAP to search for a given number in an array
11	WAP to find the transpose of a given matrix
12	WAP to addition two matrices
13	WAP to create a structure with employee details and display the same
14	WAP to process student structure containing roll number, class and age as members. The
	program must read 5 student record in an array of structure and display the details of a
	student who is eldest. Use a function to find the eldest for which array of structure is an
	argument.
15	WAP to demonstrate # define function.

^{**}Change of question is allowed only once. Marks of 05 should be deducted in the given question.

Government of Karnataka Department of Technical Education Bengaluru

	Course Title:	DBMS and GUI lab	
SQL	Scheme (L:T:P) : 0:2:4	Total Contact Hours: 78	Course Code: 15CS36P
	Type of Course: Tutorial and	Credit :03	Core/ Elective:
	Practical's		Core
CIE- 25 Mar	ks		SEE- 50 Marks

Prerequisites

Knowledge of basics DBMS theoretical concepts

Course Objectives

- 1. Provide strong formal foundation in database concepts.
- 2. Understand relational data model and systematic database design approach including conceptual design and logical design using data modelling tool.
- 3. Learn the techniques of query processing using SQL engines.
- 4. Develop a database application using any of the GUI application products.

Course Outcome

On successful completion of the course, the students will be able to attain CO:

	Course Outcome	Experiment linked	CL	Linked PO	Teaching Hrs
CO1	Explain the underlying concepts of database technologies. Design and implement a database schema for a given problem-domain.	1,2,3	U, A	1 to 10	03
CO2	Apply Normalization to a database.	1,2,3	U, A	1 to 10	03
СОЗ	Illustrate and query a database using SQL DML/DDL commands To motivate the students to relate all these to one or more commercial product environments as they relate to the developer tasks	1 to 17	A	1 to 10	48
CO4	Design, create, build, and debug Gambas /Visual Basic Database applications.	18	A	1 to 10	24
			Total	sessions	78

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course		Programme Outcomes								
	1	2	3	4	5	6	7	8	9	10
DBMS and GUI lab	3	3	3	3	3	3	3	3	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO. If \geq 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3 If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2 If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1 If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

List of Graded Practical Exercises

1. Using any open source data modelling tool (MySQL/Rational Rose/ERwin), design and develop a ER diagram for the following Library database. Specify relevant Referential constraints.

BOOK AUTHORS

BOOK ID AUTHOR NAME

PUBLISHER

BOOK COPIES

BOOK ID BRANCH ID NO COPIES

BOOK LOANS

BOOK ID	BRANCH ID	CARD NO	DATE HIRED	DIJE DATE

LIBRARY BRANCH

BRANCH ID BRANCH NAME ADDRESS

BORROWER

CARD NO	NAME	ADDRESS	PHONE
---------	------	---------	-------

- 2. Consider a GRADE_BOOK database in which instructors within an academic department record point earned by individual students in theory classes. The data requirements are summarised as follows:
 - Each student is identified by a unique identifier, first and last name and an email address.
 - Each instructor teaches certain courses each term. Each course is identified by a course number, a section number and the term in it is taught. For each course he or she teaches, the instructor specifies the minimum number of points required in order to earn letter grades, A, B, C, D and F. For Ex. 90 points for an A, 80 points for a B, 70 points for a C and so forth.
 - Students are enrolled in each course taught by the instructor.
 - Each course has a number of grading components (such as mid-term exam, final exam, project and so forth). Each grading component has a maximum number of points (100 or

- 50) and a weight (20% or 10%). The weight of all the grading components of a course is 100.
- Finally, the instructor records the points earned by each student in each of the grading components in each course. For Ex. The student 1234 earns 84 points for a mid-term exam, grading component of the section 2 course CS 2310 in the fall term of 2009. The mid-term exam grading component may have been defined to have a maximum of 100 points and a weight of 20% of the course grade.
- 3. Create the following tables for a COMPANY database

EMPLOYEE

Fname	Minit	Lname	Ssn	Bdate	Address	Sex	Salary	Super_ssn	Dno
-------	-------	-------	-----	-------	---------	-----	--------	-----------	-----

DEPARTMENT

Dname Dnumber	Mgr ssn	Mgr start date
---------------	---------	----------------

DEPT LOCATIONS

Dnumber Dlocation

PROJECT

WORKS ON

Essn	Pno	Hours

DEPENDENT

Essn	Dependent_name	Sex	Bdate	Relationship
------	----------------	-----	-------	--------------

4	Illustrate the use of constraints
	NOT NULL
	PRIMARY KEY
	UNIQUE
	CHECK
	DEFAULT
	REFERENCES
5	DATA MANIPULATION : INSERTING VALUES INTO A TABLE
6	Illustrate the use of SELECT statement
7	Conditional retrieval - WHERE clause
8	Query sorted - ORDER BY clause
9	Grouping the result of query - GROUP BY clause and HAVING clause
10	Aggregate functions in SQL (Count, Sum, Max, Min, Avg)
11	SQL operators(And, Or, Like, Between, In)
12	Query multiple tables using JOIN operation.
13	Write nested and complex queries using multiple tables.
14	Perform UPDATE, ALTER, DELETE, DROP operations on tables
15	Illustrate the use of CREATE VIEW command and manipulating
16	Use COMMIT and ROLL BACK commands
17	Use SAVEPOINT commands
18.	GUI

- 1. To study about various Gambas/Visual Basic (front end) or any other front end tool
- 2. Design a form to use various tools like label, text, combo box, list boxes, check box, option box, horizontal and vertical scroll bars, etc. Illustrate the above with an example such as survey form, registration form for an event or another other example.
- 3. Design a menu driven form to process student's results or a shopping list or any other example.
- 4. Generate a report for student's results or employee details or shopping list or any other example.
- 5. Based on any database specified in Question No. 1, 2 or 3. The application must be menu driven having suitable active controls with database connectivity. Generate different reports as per user requirements.

References

- 1. Fundamentals of Database system 5th Edition, Ramez Elmasri, Shamkan B. Navthe, Pearson Education
- 2. Visual Basic 6 How to program by Deitel & Associates
- 3. http://www.tutorialspoint.com/dbms/sql_overview.htm
- 4. http://www.sql-tutorial.net/
- 5. http://www.visualbasicbooks.com/vb6introtutorial.html
- 6. http://gambas.sourceforge.net/
- 7. http://gambasdoc.org/help

Suggested list of student activities

Note: The following activities or similar activities for assessing CIE (IA) for 5 marks (Any one) Student activity like mini-project, surveys, quizzes, etc. should be done in group of 3-5 students.

- 1. Each group should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course coordinator and programme co-ordinator.
- 2. Each group should conduct different activity and no repeating should occur.
 - Build DBMS application for processing students details such as personal details, results, attendance etc. Use minimum 3-4 tables
 - Build DBMS application for maintain a mini library of CD's. Use minimum 3-4 tables
 - Using any ER diagram modelling tool demonstrate modelling of any database containing 3-4 tables.

Course Delivery

The course will be delivered through Demonstration and Practices

Course Assessment and Evaluation Scheme

Method	d What		To whom	When/Where (Frequency in the course)	Max Marks	Evidence collected	Course outcomes
	CIE	IA	Students	Two tests (average of two tests)	10	Blue books	1,2,3,4
ment	(Continuous			Record	10	Record	
Direct Assessment	Internal Evaluation)			Student activity	05	Report	1,2,3,4
rect A				Total	25		
Di	SEE (Semester End Examination)	End Exam		End of the course	50	Answer scripts at BTE	1,2,3,4
nent	Student Feedb course	ack on	Students	Middle of the course		Feedback forms	1,2,3(half session) Delivery of course
Indirect Assessment	End of Survey	Course		End of the course		Questionnaires	1,2,3, 4 Effectiveness of Delivery of instructions & Assessment Methods

^{*}CIE – Continuous Internal Evaluation

Note:

- 1. I.A. test shall be conducted as per SEE scheme of valuation. However obtained marks shall be reduced to 10 marks. Average marks of two tests shall be rounded off to the next higher digit.
- 2. Rubrics to be devised appropriately by the concerned faculty to assess Student activities.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	10
2	Understanding	20
3	Application	70

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- 1. Blue books (10 marks)
- 2. Record (10 marks)

^{*}SEE – Semester End Examination

- 3. Student suggested activities report for 5 marks
- 4. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

Format for Student Activity Assessment

DIMENSIO N	Unsatisfactor y 1	Developin g 2	Satisfactor y 3	Good 4	Exemplary 5	Score
Collection of data	Does not collect any information relating to the topic	Collects very limited information ; some relate to the topic	Collects some basic information ; refer to the topic	Collects relevant information ; concerned to the topic	Collects a great deal of information; all refer to the topic	3
Fulfill team's roles & duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs all duties	Performs all duties of assigned team roles with presentatio n	4
Shares work equally	Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Does the assigned job without having to be reminded.	Always does the assigned work without having to be reminded and on given time frame	3
Listen to other Team mates	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Listens, but sometimes talk too much	Listens and contributes to the relevant topic	Listens and contributes precisely to the relevant topic and exhibit leadership qualities	3
					1	13/4=3.2= 4

^{*}All student activities should be done in a group of 4-5 students with a team leader.

Scheme of Valuation for End Examination

1	Creating and inserting records for minimum two tables. Use minimum 2 constraints	10
2	Executing minimum 3 queries	15
3	Build a GUI program for the table created with data grid view and options such as Add, Delete, Modify etc.	15
4	Viva-Voce	10
	Total	50

^{**}Evaluation should be based on the screen output only. No hard copy required.

Resource requirements for DBMS & GUI Lab

(For an Intake of 60 Students [3 Batches])

Sl. No.	Equipment	Quantity
1	PC systems (latest configurations with speakers)	20
2	Laser Printers	01
3	Networking (Structured) with CAT 6e / wireless	03
	24 Port switches / Wireless Router	
	I/O Boxes for networking(as required)	
4	Broad Band Connection	01

^{**}Open Source Software should be encouraged



^{**}Change of question is allowed only once. Marks of 05 should be deducted in the given question.

MODEL QUESTION BANK

- 1. a) Create table Employee and Dependent as per the following schema: Identify the Primary and referential constraints on the table. Specify suitable constraint on the salary column such that 12000 < Salary < 120000.
 - i) Employee Table

Fname	Lname	<u>ssn</u>	Bdate	Address	Sex	Salary	Super	Dno
							ssn	

ii) Dependent Table

Essn	Dependent_name	Sex	Bdate
------	----------------	-----	-------

- b) Insert records into the above tables.
- c). Queries to be executed
 - Add another column Relationship to dependent Table
 - Retrieve all female dependents of the employees who have joined service after 31-01-2010
 - Retrieve the no. Of employees and total salary drawn by the employees belonging to department no. 10.
- d) Create a GUI to show any one of the table contents(include data grid view and perform operations such as add, delete, modify etc)
- 2. a) Create table BOOK ,BOOK_AUTHORS and PUBLISHER with following Schema. Identify the Primary and referential constraints on the tables. Specify default constraint on gender column of BOOK AUTHOR table.

i)	BOOK		
	Book_id	Title	Publisher_name
ii)	BOOK_AUTHOR		
	Book_id	Author_name	Gender
iii)	PUBLISHER		
	<u>Name</u>	Address	Phone

- b) Insert records into the above tables.
- c) Queries to be executed
 - Retrieve the book details of all the books authored by "Sharma".
 - Delete the record for the publisher by name "sapna".
 - For each publisher retrieve the total number of book titles published.
- d) Create a GUI to show any one of the table contents(include data grid view and perform operations such as add, delete, modify etc).

3. a) Create table EMPLOYEE,PROJECT and WORKS_ON as per the following schema: Identify the Primary and referential constraints on the table.

i) Employee Table

Fname	Lname	Ssn	Bdate	Address	Sex	Salary	Super	Dno
							ssn	

ii) Project table

P_name P_location

iii) Works On

_		
Essn	<u>Pno</u>	Hours

- b) Insert records into the above tables.
- c) Queries to be executed
 - Retrieve employee name, address and salary with all employee names first letter in capital.
 - For each employee retrieve the total projects and total no. of hours he/she works on.
 - Illustrate the use of Save point, Rollback and Commit transaction commands.
- d) Create a GUI to show any one of the table contents (include data grid view and perform operations such as add, delete, modify etc).
- 4. a). Create table BOOK,BOOK_BORROWED and BOOK_BORROWER as per the following schema: Identify the Primary and referential constraints on the table.
 - i) Book

ii)

Book_id	Title	Publisl	her_name	
Book_Borrowed				
Book_id	<u>Card_No</u>	Date_out	Due_Date	
BOOK_IU	<u>Cara_No</u>	Date_out	Due_Date	

111)	Book_Borrower
	C 1 1 1

Card No	Name	Address	Phone
---------	------	---------	-------

- b) Insert records into the above tables.
- c) Queries to be executed
 - Retrieve the names of people who have borrowed "Computer Network" book.
 - Retrieve the number of days permitted to borrow "Computer Organization" by "Cherry".
 - Illustrate the use of any four numeric functions.
- d) Create a GUI to show any one of the table contents (include data grid view and perform operations such as add, delete, modify etc).
- 5. a) Create table CUSTOMER, ACCOUNT, LOAN as per the following schema: Identify the Primary and referential constraints on the table.
 - i) Customer

	Account_no	Name	Address	Phone	İ
ii)	Account				
	Account_no.	Transaction_type	Amount	Balance	
iv)	Loan				=

Loan type

b) Insert records into the above tables.

Account no

c) Queries to be executed

Loan no

• Retrieve all customers who have availed the loan amount of more than 5 lakhs.

Amount

- Create a view with the following attributes: Customer name, bank balance and loan amount.
- Illustrate the use of Grant and Revoke commands.
- d) Create a GUI to show any one of the table contents (include data grid view and perform operations such as add, delete, modify etc).
- 6. a) Create table ART_OBJECT, PAINTING and STATUE as per the following schema: Identify the Primary and referential constraints on the table.
 - i) Art object

Id_r	o Artist	Name Year	Created	Title	Art_ type	Description
------	----------	-----------	---------	-------	-----------	-------------

Art type can either Painting or Statue

ii) PAINTING

Paint_type	Base_Material	Style	Price				
Paint type can be oil	gaint type can be all or water colour or organic colour						

Paint type can be oil or water colour or organic colour

Base material can be paper, canvas or wood

Style can be Modern or Abstract

iv) Statue

Material_type He	leight	Weight	Style	Price

Material tyoe can be stone, wood, glass

Style can be Modern or Abstract

- b) Insert records into the above tables.
- c) Queries to be executed
- Retrieve the details of the costliest painting using nested queries.
- Retrieve the names of the artist who have worked on Abstract style
- Delete all the records pertaining to the artist by name "Sahithya".
- d) Create a GUI to show any one of the table contents (include data grid view and perform operations such as add, delete, modify etc).



Interest rate

Government of Karnataka Department of Technical Education Bengaluru

	G		
(3)	Course Title: N)	
	Scheme (L:T:P) : 0:2:4	Total Contact Hours: 52	Course Code: 15CS37P
	Type of Course: Practical's &	Credit :03	Core/ Elective:
	Student Activity		Core
CIE- 25 Ma	rks		SEE- 50 Marks

Prerequisites

Knowledge of computer operation.

Course Objectives:

- 1. Learn basic fault detection, assembly and disassembly of PC
- 2. Learn and understand OS installation and network services.

Course Outcome

On successful completion of the course, the students will be able to attain CO:

	Course Outcome	Experiment linked	CL	Linked PO	Teaching Hrs
CO1	Identify the different faults related to CPU and RAM	1 to 4	U, A	1 to 10	18
CO2	Demonstrate the skills for assembly and disassembly of a PC and install OS	5-6	A	1 to 10	12
CO3	Demonstrate the skills for computer networking and its services.	7-11	A	1 to 10	48
			Total	sessions	78

Legends: R = Remember U= Understand; A= Apply and above levels (Bloom's revised taxonomy)

Course-PO Attainment Matrix

Course		Programme Outcomes								
	1	2	3	4	5	6	7	8	9	10
Network Administration Lab	3	3	3	3	3	3	3	3	3	3

Level 3- Highly Addressed, Level 2-Moderately Addressed, Level 1-Low Addressed.

Method is to relate the level of PO with the number of hours devoted to the COs which address the given PO. If \geq 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 3 If 25 to 40% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 2 If 5 to 25% of classroom sessions addressing a particular PO, it is considered that PO is addressed at Level 1 If < 5% of classroom sessions addressing a particular PO, it is considered that PO is considered not-addressed.

List of Graded Practical Exercises

- 1. Study and measure voltages of SMPS
- 2. Drawing the motherboard layout (any latest processor) and studying the chipset through data books or Internet
- 3. CMOS setup of any latest PC
- 4. Fault findings: (a) Problems related to CPU (b) Problems related to RAM
- 5. Disassembly and Assembling of PC and Installation of Operating System
 - a) Windows b) Linux. Perform dual booting also.
- 6. Learn parallel port, serial port and USB port testing and Installation of Scanner, Printers and ADSL/DSL Modems
- 7. Crimping of RJ45: Straight and Cross.
 - a) Punching Cat 6 cable to I/O Box. Use punching tool.
 - b) Check connectivity using LAN tester.
- 8. Install a Switch and Wireless router
- 9. Study different IP class (A, B, C) addressing. (Manual & Dynamic). Check connectivity for peer-to-peer and client-server
- 10. Windows Server & also install the following services
 - a) Active directory b) DNS c) DHCP
- 11. Visit any industry / institutes (Engineering colleges, university campuses, etc) and study the following
 - i) Type and Configuration of client PC's and OS (Eg: Linux, Windows, MAC etc.)
 - ii) Type and Configuration of Servers and Domains used
 - iii) Type of networking (Topology and media used)
 - iv) Different network devices used (switch, routers, access points etc)
 - v) Different types of peripheral devices used (Eg: printers, scanner, web cam etc.)
 - vi) Applications used by the users.

Prepare a report of about 3 to 4 (A4 size) pages and include in the lab record.

E-learning content

- 1. http://www.howtogeek.com/
- 2. http://www.infotechguyz.com/
- 3. http://www.rebeladmin.com/2011/03/step-by-step-guide-to-setup-active-directory-windows-server-2008/

Suggested list of student activities

Note: The following activities or similar activities for assessing CIE (IA) for 5 marks (Any one) Student activity like mini-project, surveys, quizzes, etc. should be done in group of 3-5 students.

- 1. Each group should do any one of the following type activity or any other similar activity related to the course and before conduction, get it approved from concerned course co-ordinator and programme co-ordinator
- 2. Each group should conduct different activity and no repeating should occur

Suggested activities

1	Study and prepare a comparative report about the make, model, configuration,
	etc., of different types of Printers.
2	Study and prepare a comparative report about the make, model, configuration,
	etc., of different types of Scanners.

3	Study and prepare a comparative report about the make, model, configuration,
	etc., of different types of computer systems / laptops etc.
4	Study and prepare a comparative report about the make, model, configuration,
	etc., of different network components and devices such as router, switches, etc.
5	Video conferencing using skpye etc.

Course Delivery

The course will be delivered through practical's and presentations

Course Assessment and Evaluation Scheme:

Method			To whom	When/Where (Frequency in	Max Marks	Evidence collected	Course outcomes
			,,,10111	the course)	17202115	• • • • • • • • • • • • • • • • • • • •	0.000011100
th.	CIE	IA	Students	Twice test	10	Blue books	
Direct Assessment meth				(average of			
ent				two tests) Record	10	Record	1,2,3
l in				Student	05		1,2,3
sess				activity	03	Report	
As				Total	25		
ect	SEE	End		End of the	50	Answer scripts	1,2,3
Din		Exam		course		at BTE	
	Studen	t	Students	Middle of the		Feedback	1,2
<u>+</u>	Feedba	ick on		course		forms	Delivery of
 ner	course						course
SSD	End	of		End of the		Questionnaires	1,2,3
sse	Course			course			Effectiveness
I A	Survey						of Delivery of
Indirect Assessment							instructions &
- Idii							Assessment
Ir							Methods

^{*}CIE – Continuous Internal Evaluation

Note:

- 1. I.A. test shall be conducted as per SEE scheme of valuation. However obtained marks shall be reduced to 10 marks. Average marks of two tests shall be rounded off to the next higher digit.
- 2. Rubrics to be devised appropriately by the concerned faculty to assess Student activities.

Questions for CIE and SEE will be designed to evaluate the various educational components (Bloom's taxonomy) such as:

Sl. No	Bloom's Category	%
1	Remembrance	10
2	Understanding	20
3	Application	70

^{*}SEE – Semester End Examination

Note to IA verifier: The following documents to be verified by CIE verifier at the end of semester

- 1. Blue books (10 marks)
- 2. Record (10 marks)
- 3. Student suggested activities report for 5 marks
- 4. Student feedback on course regarding Effectiveness of Delivery of instructions & Assessment Methods.

Format for Student Activity Assessment

DIMENSION	Unsatisfactory 1	Developing 2	Satisfactory 3	Good 4	Exemplary 5	Score
Collection of data	Does not collect any information relating to the topic	Collects very limited information; some relate to the topic	Collects some basic information; refer to the topic	Collects relevant information; concerned to the topic	Collects a great deal of information; all refer to the topic	3
Fulfill team's roles & duties	Does not perform any duties assigned to the team role	Performs very little duties	Performs nearly all duties	Performs all duties	Performs all duties of assigned team roles with presentation	4
Shares work equally	Always relies on others to do the work	Rarely does the assigned work; often needs reminding	Usually does the assigned work; rarely needs reminding	Does the assigned job without having to be reminded.	Always does the assigned work without having to be reminded and on given time frame	3
Listen to other Team mates	Is always talking; never allows anyone else to speak	Usually does most of the talking; rarely allows others to speak	Listens, but sometimes talk too much	Listens and contributes to the relevant topic	Listens and contributes precisely to the relevant topic and exhibit leadership qualities	3
					TOTAL	13/4=3.25=4

^{*}All student activities should be done in a group of 4-5 students with a team leader.

Scheme of Examination

1	Writing Procedure for two experiments (One each from Part A & Part B)	10+10=20
2	Conduction any ONE	20
3	Viva-Voce	10
	Total	50

^{**}Evaluation should be based on the screen output only. No hard copy required.

Resource requirements for Network Administration Lab

(For an Intake of 60 Students [3 Batches])

Sl. No.	Equipment	Quantity
1	Servers	02
2	PC systems (latest configurations with speakers)	20
3	Laser Printers	02
4	Scanners	02
5	Web cameras	
6	Crimping Tools	10
7	Mulitmeter	10
8	I/O box Punching tool	10
9	LAN Tester	10
10	Wireless Router	04
11	CAT 6e cable	As Required
12	24 Port switches	04
13	I/O Boxes for networking	As required
14	RJ 45 connector	As required
15	Broad Band Connection	01
16	Windows server software	10 user licence

^{**}Open Source Software should be encouraged



^{**}Change of question is allowed only once. Marks of 05 should be deducted in the given question.

MODEL QUESTION BANK

Part-A

- 1. Conduct an experiment to measure voltages of SMPS.
- 2. Conduct an experiment to study the CMOS setup of any latest PC.
- 3. Conduct an experiment to for parallel port, serial port and USB port testing.
- 4. Conduct an experiment to install Scanner.
- 5. Conduct an experiment to install Printer.
- 6. Conduct an experiment for Fault finding, problems related to CPU.
- 7. Conduct an experiment for Fault finding, problems related to RAM.
- 8. Conduct an experiment to Disassembly PC.
- 9. Conduct an experiment to Assemble PC.
- 10. Conduct an experiment to install Windows Operating System.
- 11. Conduct an experiment to install Linux Operating System.

Part-B

- 12. Conduct an experiment to perform crimping of RJ45 for Straight cabling and Check connectivity using LAN tester.
- 13. Conduct an experiment to perform crimping of RJ45 for Cross cabling Check connectivity using LAN tester.
- 14. Conduct an experiment to have manual IP addressing and check connectivity.
- 15. Conduct and experiment to install Windows Server & Active directory. Check connectivity using either peer-to-peer / Client-server
- 16. Conduct and experiment to install Windows Server & DNS. Check connectivity using either peer-to-peer / Client-server
- 17. Conduct and experiment to install Windows Server & DHCP. Check connectivity using either peer-to-peer / Client-server



3ನೇ ಸೆಮಿಸ್ಟರ್ ಕನ್ನಡ-1 (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪರಿಚಯ)

3rd	Course: Kannada Kali-1	Course Code:15KA3NT (2016-17)
Semester No. of Credits:02		No. of teaching hours/week:02 No. of teaching hours/Semester:26
	Mode of Assessment and Evaluation:	Maximum Marks: 50 (CIE only) Minimum Passing marks:20
	Continuous Internal Evaluation (CIE) only. I.A Tests:30 Marks (3 Tests) Student activities: 20 Marks	

ಉದ್ದೇಶ:

- 1. ಕೇಳುವುದು, ಗ್ರಹಿಸುವುದು, ನಿರರ್ಗಳವಾಗಿ ಮತ್ತು ಸ್ಪಷ್ಟವಾಗಿ ಓದುವ ಮತ್ತು ಮಾತನಾಡುವ (ಅಭಿವ್ಯಕ್ತಿಸುವ) ಸಾಮರ್ಥ್ಯವನ್ನು ಬೆಳೆಸುವುದು.
- 2. ಜ್ಞಾನಾರ್ಜನೆ, ಸಾಹಿತ್ಯಾಭಿರುಚಿ, ಚಿಂತನೆ ಮತ್ತು ಆನಂದಕ್ಕಾಗಿ ಸ್ವತಂತ್ರವಾಗಿ ಓದಲು, ಬರೆಯಲು ಮತ್ತು ಮಾತನಾಡಲು ಸಮರ್ಥರಾಗುವಂತೆ ಮಾಡುವುದು.
- 3. ಪದ ಸಂಪತ್ತನ್ನು ಹೆಚ್ಚಿಸಿಕೊಂಡು ಸ್ಪಷ್ಟ ಉಚ್ಚಾರಣೆಯೊಡನೆ ಲಿಖಿತ ಮತ್ತು ಮೌಖಿಕ ಚಟುವಟಿಕೆಗಳನ್ನು ಮಾಡಿಸಿ, ಸ್ವತಂತ್ರವಾಗಿ ಭಾಷೆಯ ಬಳಕೆ ಮಾಡುವುದು.
- 4. ನಾಡು-ನುಡಿ, ಸಂಸ್ಕೃತಿ ಮತ್ತು ಸಾಹಿತ್ಯಗಳ ಪರಿಚಯ ಮತ್ತು ಆತ್ಮಿಯ ಭಾವಾಭಿಮಾನವನ್ನು ಬೆಳೆಸುವುದು.
- 5. ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆಗಳಿಂದ ಭಾಷಾ ಕೌಶಲ್ಯದ ಸರಳ ಪ್ರಯೋಗ ಮಾಡಿಸುವುದು./ಕಲಿಸುವುದು. (ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆ ಎಂದರೆ, ವರ್ಣಮಾಲೆ ಪರಿಚಯ, ವ್ಯಾಕರಣದ ಸರಳ ಪರಿಚಯ, ಗುಣಿತಾಕ್ಷರ, ಸಂಯುಕ್ತಾಕ್ಷರಗಳು, ನಾಮಪದ, ಲಿಂಗ, ವಚನ, ಪ್ರತ್ಯಯಗಳು, ವಾಕ್ಯರಚನೆ (ಕತ್ತ, ಕರ್ಮ, ಕ್ರಿಯಾಪದ) ಇತ್ಯಾದಿ)

ಪಠ್ಯಕ್ರಮ ಮತ್ತು ಸರಳ ಭಾಷಾ ಕೌಶಲ್ಯ (ಕನ್ನಡ ಕಲಿ–ಪಠ್ಯಮಸ್ತಕ –ಶ್ರೀ ಲಿಂಗದೇವರು ಹಳೇಮನೆ – ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ ಪ್ರಕಾಶನ) ಭಾಗ–1

ಪಾಠಗಳ ಕ್ರಮಾಂಕ Lesson No	ಪಠ್ಯವಸ್ತುವಿನ ವಿವರ – Curriculum Content	ಸೆಮೆಸ್ಟರ್ ಬೋಧನ ಆವಧಿ Total no.of Classes /Sem
	ಕನ್ನಡ ಭಾಷೆಯ ಪರಿಚಯ/ವರ್ಣಮಾಲೆ/'ಕನ್ನಡ ಕಲಿ'ಯುವ ವಿಧಾನ ಕುರಿತ ಮಾಹಿತಿ	02
1	Introducing each other Personal Pronouns, Possessive forms and Interrogative words 1. ನಾವು ಮತ್ತು ಭಾಷೆ 2. ಅಕ್ಷರಗಳಿಂದ ಪದಗಳು	03
2	Introducing each other Personal Pronouns, Possessive forms - Yes/No Type Interrogative	02
3	About Ramayana. Possessive forms of nouns, dubitive question, Relative nouns. ಪದಗಳಿಂದ ವಾಕೃಗಳು	02
4	Enquiring about college. Qualitative and quantitative adjectives.	02
5	Enquiring about room. Predicative forms,	02

	locative case.	
6	Vegetable Market. Dative case, basic numerals.	02
7	About Medical college. Ordinal numerals, plural markers.	02
8	In a cloth shop. Color adjectives, defective verbs	02
9	Plan to go for picnic - imperative, permissive and hortative	02
10	Enquiring about one's family, Verb iru, and corresponding negation ಕನ್ನಡ ಚಿತ್ರಪಟಗಳಲ್ಲಿನ ಅಕ್ಷರಗಳನ್ನು ಗುರುತಿಸಿ ಓದಿ ದಿನಪತ್ರಿಕೆ ಓದುವ ಹವ್ಯಾಸಸಂವಹನ ಮಾಧ್ಯಮದ ಬಗ್ಗೆ ಪರಿಚಯ	02
	ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು	03
	ಒಟ್ಟು ಗಂಟೆಗಳು	26

ಸೂಚನೆಗಳು:

- ಈ ಪಠ್ಯದ ಮೂಲ ಉದ್ದೇಶ ಕನ್ನಡೇತರ ವಿದ್ಯಾರ್ಥಿಗಳು ಸರಳ ಕನ್ನಡ ಭಾಷೆಯಲ್ಲಿ ವ್ಯವಹರಿಸುವಂತೆ ಮಾಡುವುದಾಗಿದೆ. "ಕನ್ನಡ ಕಲಿ" ಮಸ್ತಕದ ಮೇಲಿನ ಪಾಠಗಳ ಜೊತೆಗೆ "ಕ್ರಿಯಾತ್ಮಕ ಚಟುವಟಿಕೆ"ಯಿಂದ ಗಳಿಸುವ ಅಕ್ಷರ ಜ್ಞಾನದಿಂದ ಪದ ಸಂಪತ್ತು ಹೆಚ್ಚಿಸಿ, ಪದಗಳಿಂದ ಸ್ವಂತ ವಾಕ್ಯಗಳ ರಚನೆ ಮಾಡಿಸುವುದು. (ಅಮ್ಮ ಮೊಬೈಲ್, ಕನ್ನಡ ಭಾಷೆ, ಕವಿಗಳು, ನಾಟಕ, ಜನಪದ ಕಲೆ, ನಾಡಿನ ಪ್ರಸಿದ್ಧ ವ್ಯಕ್ತಿಗಳು, ಸಹೋದರ, ಸ್ನೇಹಿತ, ತರಕಾರಿ, ದೋಸೆ, ತಿಂಡಿ, ನಿದ್ದೆ, ಬಿಸಿ, ಚಳಿ, ಆಕಾಶ, ಓದು, ಇತ್ಯಾದಿ ನಿತ್ಯ ಬಳಕೆಯ ಸರಳ ಪದಗಳಿಂದ ವಾಕ್ಯರಚನೆ ಮತ್ತು 25–50 ಪದಗಳ ಕಿರು ಲೇಖನ ರಚನೆ).
- ತರಗತಿ ಚಟುವಟಿಕೆಗಳ ಪುಸ್ತಕದಲ್ಲಿ (ಕ್ಲಾಸ್ ಅಸೈನ್ಮೆಂಟ್) ಕನ್ನಡ ವರ್ಣಮಾಲೆಯ ಸ್ವರ, ವ್ಯಂಜನಗಳ ಅಕ್ಷರಗಳ ಬರವಣಿಗೆ ಅಭ್ಯಾಸ, ವ್ಯಂಜನಗಳಿಗೆ ಸ್ವರಗಳನ್ನು ಸೇರಿಸುವಿಕೆ, ಅಕ್ಷರಗಳಿಂದ ಪದರಚನೆ, ಪದಗಳಿಗೆ ಪ್ರತ್ಯಯಗಳನ್ನು ಸೇರಿಸುವುದು(ಗೆ, ಯಿಂದ, ಅನ್ನು, ಅಲ್ಲಿ, ಗಳು, ಎಂದು.....ಇತ್ಯಾದಿ ಪಠ್ಯದಲ್ಲಿ ಬರುವ ಪದಗಳಿಗೆ ನಿತ್ಯ ಬಳಕೆಯ ಪ್ರತ್ಯಯಗಳನ್ನು ಸೇರಿಸುವುದು) ಪದಗಳಿಂದ ವಾಕ್ಯ ರಚನೆ. ಮಾಡುವುದು. ಮತ್ತು ಪಾಠ 1-10ರ ಪಠ್ಯಾಂತ್ಯದಲ್ಲಿ ಬರುವ ಅಭ್ಯಾಸಗಳಲ್ಲಿ ಆರಿಸಿದ ಅಭ್ಯಾಸ ಭಾಗಗಳನ್ನು ಬರೆಸುವುದು. ಮತ್ತು ಪಾಠ-20 ರ ಸ್ತ್ರಿಪ್ಟ್- ಅನ್ನು ಆಧಾರವಾಗಿಟ್ಟುಕೊಂಡು ಅಭ್ಯಾಸ ಮಾಡಿಸುವುದು.

ಆಕರ ಗ್ರಂಥಗಳು:

- 1. ಕನ್ನಡ ಕಲಿ-ಶ್ರೀ ಲಿಂಗದೇವರು ಹಳೇಮನೆ ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
- 2. ಪ್ರಾಥಮಿಕ ಶಾಲೆಯ ಕನ್ನಡ ಪಠ್ಯಮಸ್ಥಕಗಳು
- 3. ಸರಳ ಕನ್ನಡ ವ್ಯಾಕರಣ ಮಸ್ತಕಗಳು ಎಂ.ವಿ ನಾಗರಾಜರಾವ್/ಇತರೆ ಲೇಖಕರು.
- 4. ಪ್ರಯೋಗ ಪ್ರಣತಿ-ಪ್ರಥಮ ಪಿಯುಸಿ ಪೂರಕ ಪಠ್ಯ.
- 5. ಸರಳ ಪತ್ರವ್ಯವಹಾರದ ಮಸ್ತಕಗಳು

ಪರೀಕ್ಷೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನ ವಿಧಾನ (3ನೇ ಸೆಮಿಸ್ಟರ್)

ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ– Continuous Internal Evaluation (CIE) only.

ಕ್ರ.ಸಂ.	ಚಟುವಟಿಕೆಗಳು	ವಿವರ	ಗರಿಷ್ಠಾಂಕ	ಉತ್ತೀರ್ಣತೆಗೆ
				ಕನಿಷ್ಠಾಂಕ
01	ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ	ಮೂರು ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು	30	
	(I A Tests)	(ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)		
02	ಕನ್ನಡ ಭಾಷಾ ಕೌಶಲ್ಯಾಭಿವೃದ್ಧಿ	ಮೂರು ಚಟುವಟಿಕೆಗಳು	20	
	ಚಟುವಟಿಕೆಗಳು	(ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)		
	(Student Activities)	·		
	•	ಒಟ್ಟು ಅಂಕಗಳು	50	20

Course outcome:

- 1. Developing listening and speaking skills.
- 2. Easy Interaction with peers.
- 3. Students can use the language at ease in daily life situations

ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳ ಮಾದರಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಗಳು:

ನಿರಂತರ ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳಿಗೆ ಈ ಕೆಳಗಿನ ಮಾದರಿಯಲ್ಲಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆಯನ್ನು ಸಿದ್ಧಪಡಿಸಿ ನಡೆಸುವುದು ಮತ್ತು "ಕನ್ನಡ ಕಲಿ" ಪಠ್ಯದ ಕಲಿಕೆ ವಿವರಣೆ (ಭಾಷಾಭ್ಯಾಸ) ಸಂಭಾಷಣಾ ಭಾಗಗಳು ಮತ್ತು ಅಂತ್ಯದಲ್ಲಿ ಅಭ್ಯಾಸ ಮಸ್ತಕದಲ್ಲಿ ಬರುವ ಪ್ರಶ್ನೆಗಳ ವಿಧಾನವನ್ನು ಪರ್ಯಾಯವಾಗಿ ಬಳಸಿಕೊಂಡು ಪ್ರಶ್ನೆಪತ್ರಿಕೆಗಳನ್ನು ತಯಾರಿಸಿಕೊಳ್ಳಬಹುದು.

ಡಿಪ್ಲೋಮಾ 3ನೇ ಸೆಮಿಸ್ಟರ್-ಕನ್ನಡ ಕಲಿ-1 (ಕನ್ನಡೇತರರಿಗೆ ಕನ್ನಡ ಪರಿಚಯ)

ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆ

7	ಸಮಯ: 60 ನಿಮಿಷಗಳು	ಅ೦ಕ: 30
I.	Fill in the blanks using the appropriate words.(Any FOUR) i) nimma raajya? ii) adupustaka? iii) avanahesaru suratkal injiniyaring kaaleju. iv) ondu ruupaayigepaise. v) aval.ige hindustaani sanita tumba vi) nanage ninna sahavaasa khanDitaa vii) avanu nimma?	1X4=04
II.	Use the following words (any FOUR) in your own sentences. 1.adhyaapaki 2.snehita 3. Vyaapaara 4.keTTa 5. Hasiru 6.anga	1X4=04 adi 7.taaja
III.	Answer the following questions (any FOUR) (a) nimma uuru yaavudu? (b) nivu diploma vidyaarthinaa? (c) nimma pennige estu ruupaaye? (d) nimma maatrubhaashe yaavudu? (e) nimage tingalige eshtu ruupaayi beeku? (f) nimma mane/ruumu elli ide?	1X4=04
IV.	 Translate the following sentence in Kannada. (any FOUR) Kannada is the language of Karnataka. My book is in my house. We have two houses in Bangalore. How much is this Pumpkin weighs? I want two packets of biscuits. How much do you pay rent for your room? What else do you want? 	4X2=08

V. ಕೆಳಗಿನವುಗಳನ್ನು ಹೊಂದಿಸಿ ಬರೆಯಿರಿ. (Match the following)

1	V	1-0	1
- 1	Λ^{2}	⊦—(<i>)</i>	14

•	
1. ನೀವು ಯಾವಾಗ ಮನೆಯಲ್ಲಿ	1.ಇದೆ
2. ಪುಸ್ತಕ ಮೇಜಿನ ಮೇಲೆ	2.eldest son
3. Jaaga-ಜಾಗ	3.ಇರ್ತೀರಿ
4. Hiri maga	4.space

- VI. (1) Change into interragative using the underlined word. (Any Three) 1X3=03
 - 1. Ivattu guruvaara.
 - 2. evattu <u>hattanee</u> taariku
 - 3. Aval hesaru liila.
 - 4. Avara maatrabhaashe telagu alla.
 - 5. Vavige <u>ippttaydu</u> ruupaayei beeku.
 - 6. Adu <u>maalatiya</u> mane.

(2) change into Interrogate. (Any THREE)

1X3=03

- 1.ಹೌದು, ಇದು ಮಸ್ತಕ.
- 2. ಆಗಲಿ, ಹೋಗೋಣ.
- 3. ಈಗ ಒಂದೂವರೆ ಗಂಟೆ.
- 4. ಅವರು ಮನೆಗೆ ಬರುತ್ತಾರೆ.
- 5. ನಾವಿ ಮನೆಗೆ ಹೋಗೋಣ.
- 6. ಅವರು ಮನೆಗೆ ಹೋಗಲಿ.

ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ರಚನಾ ಸಮಿತಿ

• ಸಂಪಾದಕೀಯ ಸಮಿತಿ:

- 1. ಶ್ರೀ ಟಿ ಎಲ್ ರವೀಂದ್ರ, ಉಪನ್ಯಾಸಕರು, ಸರ್ಕಾರಿ ಜಿ.ಆರ್.ಐ.ಸಿ.ಪಿ ಬೆಂಗಳೂರು.
- 2. ಶ್ರೀ ಟಿ. ತಿಮ್ಮಪ್ಪ, ಉಪನ್ಯಾಸಕರು(ಆಯ್ಕೆ ಶ್ರೇಣಿ), ಯಾಂತ್ರಿಕ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಪಾಲಿಟೆಕ್ನಿಕ್, ತುಮಕೂರು.
 - ಸಲಹಾ ಸಮಿತಿಯ ಬಾಹ್ಯ ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು.
- 1. ಪ್ರೊ. (ಡಾ.) ಡಿ. ಪಾಂಡುರಂಗ ಬಾಬು, ಕುಲಸಚಿವರು, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
- 2. ಪ್ರೊ. (ಡಾ.) ಅಶೋಕ್ ಕುಮಾರ್ ರಂಜರೆ, ಪ್ರಾಧ್ಯಾಪಕರು, ಪ್ರಸಾರಾಂಗ ವಿಭಾಗ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
- 3. ಪ್ರೊ. (ಡಾ.) ಕೆ ವೈ ನಾರಾಯಣ ಸ್ವಾಮಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಸ್ನಾತಕೋತ್ತರ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಕಲಾ ಕಾಲೇಜು, ಬೆಂಗಳೂರು.
- 4. ಪ್ರೊ. (ಡಾ.) ಜೆ ಬಾಲಕೃಷ್ಣ, ಪ್ರಾಧ್ಯಾಪಕರು ಹಾಗು ಮುಖ್ಯಸ್ಥರು, ಕನ್ನಡ ಭಾಷಾ ಅಧ್ಯಯನ ವಿಭಾಗ, ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾಲಯ, (ಜಿಕೆವಿಕೆ) ಹೆಬ್ಬಾಳ, ಬೆಂಗಳೂರು.

	KARNATAKA STATE BOARD OF TECHNICAL EXAMINATION, BENGALURU.												
	TEACHING AND EXAMINATION SCHEME FOR KANNADA COURSE IN DIPLOMA PROGRAME												
SEMES	TER: III		C	ОММО	OT NC	ALL D	IPLOMA F	PROGRAM	1MES			C-15 Curric	ulum
SL.N0	/OD CODE Contact hou												
	COURSE NAME 🗼 ခ်		g ner		TH TU		TOTAL	Credit	Exam	End exam		Maximum	Minimum
		Teaching Department							paper	Max	Min	CIE Marks	Marks for
		eac							duration	marks	marks		passing.
		⊢ □							in Hrs			(IA+SA)	(IA + SA)
	THEORY												
1	KANNADA KALI-1	KA	15KA3NT	2	-	-	2	2	-	-	-	50	20
2	TANTRIKA KANNADA -1	KA	15KA3KT	2	-	-	2	2	-	-	-	50	20

CIE- Continuous Internal Examination: SEE-Semester End Examination: IA-Internal Assessment Tests: SA- Student Activity.

Note: 1. Candidates studied Kannada as one subject in 10th standard shall take Tantrika Kannada 1 &2. Others may take "Kannada Kali-1&2".

2. In 3rd Semester- Assessment is only by CIE and no SEE. Average marks of three I A tests shall be rounded off to the next higher digit. Rubrics to be devised appropriately to assess student activity.

	KARNATAKA STATE BOARD OF TECHNICAL EXAMINATION, BENGALURU.												
	TEACHING AND EXAMINATION SCHEME FOR KANNADA COURSE IN DIPLOMA PROGRAME												
SEMESTER: IV CON				OMMO	N TO	ALL DI	IPLOMA P	ROGRAM	MES			C-15 Currio	culum
SL.N0			COURSE		Te	achin	g scheme			Exa	mination s	cheme	
		±	/QP CODE		C	Contac	ct hours						
	COURSE NAME	g nent		TH	TU	PR	TOTAL	Credit	Exam Sem End Exam Maximum Minim			Minimum	
		Teaching Departm							paper	Max	Min	CIE Marks	Marks for
		eac							duration	Exam	Passing		passing.
		ĭ							in Hrs	Marks	Marks	(IA+SA)	(IA + SA)
	THEORY												
1	KANNADA KALI-2	KA	15KA4NT	2	-	-	2	2	2	50	20	-	-
2	TANTRIKA	KA	15KA4KT	2	-	-	2	2	2	50	20	-	-
	KANNADA -2												

CIE- Continuous Internal Examination: SEE-Semester End Examination: IA-Internal Assessment Tests: SA- Student Activity.

Note: In 4th Semester- Assessment is only by SEE and no CIE. To award diploma certificate, passing in Kannada course is mandatory. However Kannada course is not included in the eligibility criteria for promotion to the higher semester.

ಡಿಪ್ಲೋಮಾ-ತಾಂತ್ರಿಕ ಕನ್ನಡ-1 (ಕನ್ನಡ ಬಲ್ಲವರಿಗಾಗಿ) 3ನೇ ಸೆಮಿಸ್ಟರ್ – ತಾಂತ್ರಿಕ ಕನ್ನಡ -1 (ಸಾಹಿತ್ಯ ಮತ್ತು ಭಾಷಾ ಕೌಶಲ್ಯ ಪ್ರಯೋಗ) ಪಠ್ಯಕ್ರಮ

	Course: ತಾಂತ್ರಿಕ ಕನ್ನಡ –1	Course Code:15KA3KT (2016-17)
3 rd Semester	No. of Credits:02	No. of teaching hours/week:02 No. of teaching hours/Semester:26
	Mode of Assessment and	Maximum Marks: 50 (CIE only)
	Evaluation:	Minimum Passing marks:20
	Continuous Internal	(IA Tests + Student activities)
	Evaluation (CIE) only.	
	I.A Tests:30 Marks	
	(3 Tests)	
	Student activities:	
	20 Marks	

ಪಠ್ಯ ಪ್ರಕಾರ	ಪಾಠ	ಪಠ್ಯದ ಹೆಸರು/ಲೇಖಕರು/ಪ್ರಕಟಣೆ	ಸೆಮಿಸ್ಟರ್
· ·			ಬೋಧನಾವಧಿ
			ಗಂಟೆಗಳು
ಇತಿಹಾಸ	1	'ಸಂಸ್ಕೃತಿ'– ದೇ.ಜೆ.ಗೌ (ನಾಟ್ಯ ಸಂಸ್ಕೃತಿ–ದೇ.ಜೆ.ಗೌ)	02
ಸಂಸ್ಕೃತಿ	2	ನಮಗೆ ಬೇಕಾಗಿರುವ ಇಂಗ್ಲಿಷ್ – ಕುವೆಂಪು	02
ಪರಿಸರ	3	ಆನೆ ಹಳ್ಳದಲ್ಲಿ ಹುಡುಗಿಯರು – ಬಿ ಜಿ ಎಲ್ ಸ್ವಾಮಿ	02
ಕ್ರೀಡೆ/ಜೀವನಕಲೆ	4	ಸೋಲೆಂಬುದು ಅಲ್ಪವಿರಾಮ – ನೇಮಿಚಂದ್ರ	02
ಯಶೋಗಾಥೆ/ವ್ಯಕ್ತಿಚಿತ್ರಣ	5	ಬದುಕನ್ನು ಪ್ರೀತಿಸಿದೆ ಸಂತ – ಎಚ್.ಆರ್.ರಾಮಕೃಷ್ಣ (ಕಲಾಂರ	02
		ವ್ಯಕ್ತಿ ಚಿತ್ರ)	
ತಂತ್ರಜ್ಞಾನ	6	ಮಂಗಳನ ಅಂಗಳದಲ್ಲಿ – ಜೆ.ಬಾಲಕೃಷ್ಣ	02
ಭಾಷಾ ಕೌಶಲ್ಯ	7	* ಮೌಖಿಕ ಅಭಿವ್ಯಕ್ತಿ: ಸಹಜ ಭಾಷಾ ಬಳಕೆ:	06
ಚಟುವಟಿಕೆಗಳು		. <u>ಆಶು ಭಾಷಣ</u> > ವಿವಿಧ ರಚನಾತ್ಮಕ/ದೈನಂದಿನ ಬಳಕೆ ವಸ್ತು,	
		ವ್ಯಕ್ತಿ, ಭಾವನೆಗಳ ಮೇಲೆ.	
		ಒಂದು ಸಣ್ಣ ಏಕಾಂಕ (5–10 ನಿಮಿಷ) ನಾಟಕ.	
		ಮಾದರಿ ಸಂದರ್ಶನ (ನೇಮಕಾತಿಗಾಗಿ ಸಂದರ್ಶನ)	
ಲಿಖಿತ ಚಟುವಟಿಕೆಗಳು	8	ವಿಸ್ತರಣೆ : ನುಡಿಗಟ್ಟುಗಳು–ಪದಗಳನ್ನು ಬಳಸಿಕೊಂಡು ಸಣ್ಣ	06
		ವಾಕ್ಯಗಳ ರಚನೆ	
		ಪರ್ಯಾಯ ಪದಗಳನ್ನು ಬರೆಯುವುದು(ಉದಾ:	
		ಬಳಸು=ಉಪಯೋಗಿಸು, ಕಾಯು= ನಿರೀಕ್ಷಿಸು,	
		ಚಿಂತಿಸು=ಯೋಚಿಸು, ಕೂಡಿಸುವಿಕೆ=ಸೇರಿಸುವಿಕೆಇತ್ಯಾದಿ)	
		ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು	02
		ಒಟ್ಟು ಗಂಚಗಳು	26

ತಾಂತ್ರಿಕ ಕನ್ನಡ–1

3ನೇ ಸೆಮಿಸ್ಟರ್ ಡಿಪ್ಲೋಮಾದ ಕನ್ನಡ ಪಠ್ಯ (ಕನ್ನಡ ಬಲ್ಲವರಿಗಾಗಿ)

- 1. ಪಠ್ಯರಚನಾ ಸಮಿತಿ
- 2. ನಿರ್ದೇಶಕರ ಮುನ್ನುಡಿ
- 3. ಪಠ್ಯ ರಚನಾ ಸಮಿತಿ ಮಾತುಗಳು
- 4. ಪಠ್ಯಕ್ರಮ

ಪರಿವಿಡಿ

<u>ಗದ್ಯ ವಿಹಾರ</u>

- 1. ನಾಟ್ಯ ಸಂಸ್ಕೃತಿ (ಇತಿಹಾಸ) ದೆ.ಜೆ.ಗೌ
- 2. ನಮಗೆ ಬೇಕಾಗಿರುವ ಇಂಗ್ಲಿಷ್ (ಸಂಸ್ಕೃತಿ) _ ಕುವೆಂಪು
- 3. ಸೋಲೆಂಬುದು ಅಲ್ಪವಿರಾಮ (ಕ್ರೀಡೆ/ಜೀವನಕಲೆ) ನೇಮಿಚಂದ್ರ 4. ಆನೆ ಹಳ್ಳದಲ್ಲಿ ಹುಡುಗಿಯರು (ಪರಿಸರ) ಬಿ.ಜಿ.ಎಲ್.ಸ
- 4. ಆನೆ ಹಳ್ಳದಲ್ಲಿ ಹುಡುಗಿಯರು (ಪರಿಸರ) _ ಬಿ.ಜಿ.ಎಲ್.ಸ್ವಾಮಿ
- 5. ಬದುಕನ್ನು ಪ್ರೀತಿಸಿದ ಸಂತ (ಯಶೋಗಾಥೆ/ವ್ಯಕ್ತಿಚಿತ್ರಣ) ಎಚ್.ಆರ್.ರಾಮಕೃಷ್ಣ
- ಡಾ:ಜೆ.ಬಾಲಕೃಷ್ಣ 6. ಮಂಗಳನ ಅಂಗಳದಲ್ಲಿ.....

ಭಾಷಾ ಕೌಶಲ್ಯ-ಚಟುವಟಿಕೆಗಳು

- 7. ಮೌಖಿಕ ಅಭಿವ್ಯಕ್ತಿ ಚಟುವಟಿಕೆಗಳು
- 8. ಲಿಖಿತ ಅಭಿವ್ಯಕ್ಕಿ ಚಟುವಟಿಕೆಗಳು

Course outcome:

- 1. Developing listening and speaking skills.
- 2. Easy Interaction with peers.
- 3. Students can use the language at ease in daily life situations

ಪರೀಕ್ಷೆ ಮತ್ತು ಮೌಲ್ಯಮಾಪನ ವಿಧಾನ (3ನೇ ಸೆಮಿಸ್ಟರ್)

ನಿರಂತರ ಅಂತರಿಕ ಮೌಲ್ಯಮಾಪನ– Continuous Internal Evaluation (CIE) only.

ಕ್ರ.ಸಂ.	ಚಟುವಟಿಕೆಗಳು	ವಿವರ	ಗರಿಷ್ಠಾಂಕ	ಉತ್ತೀರ್ಣತೆಗೆ ಕನಿಷ್ಠಾಂಕ
01	ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ (I A Tests)	ಮೂರು ಆಂತರಿಕ ಮೌಲ್ಯಮಾಪನ ಪರೀಕ್ಷೆಗಳು (ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)	30	
02	ಕನ್ನಡ ಭಾಷಾ ಕೌಶಲ್ಯಾಭಿವೃದ್ದಿ ಚಟುವಟಿಕೆಗಳು (Student Activities)	ಮೂರು ಚಟುವಟಿಕೆಗಳು (ತಾಂತ್ರಿಕ ಪ್ರಬಂಧ/ಅಶುಭಾಷಣ/ಚರ್ಚೆ/ತಾಂತ್ರಿಕ ಕ್ಷೇತ್ರಗಳಲ್ಲಿನ ಅವಿಷ್ಕಾರಗಳ ಬಗ್ಗೆ ವಿಶ್ಲೇಷಣೆ ಇತ್ಯಾದಿ.) (ಸರಾಸರಿ ಅಂಕಗಳನ್ನು ಪರಿಗಣಿಸುವುದು)	20	
		ಒಟ್ಟು ಅಂಕಗಳು	50	20

ಸೂಚನೆ:

ಭಾಷಾ ಚಟುವಟಿಕೆಗಳಿಗಾಗಿ ತರಗತಿ ಚಟುವಟಿಕೆಗಳ ಪುಸ್ತಕದಲ್ಲಿ (ತರಗತಿಯ ಪ್ರಗತಿಪರ ಮೌಲ್ಯಮಾಪನ). ಗಾದೆಗಳ ವಿಸ್ತರಣೆ, ನುಡಿಗಟ್ಟುಗಳು, ಸಂಭಾಷಣೆ ಮಾದರಿಗಳು ಮತ್ತು ಪಠ್ಯದ ಸಾಹಿತ್ಯ ಭಾಗದ ಪಾಠಗಳ ಮೇಲೆ ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರ– ಟಿಪ್ಪಣಿ ಮತ್ತು ಶಬ್ದಾರ್ಥದಲ್ಲಿ ಬರುವ ಪದಗಳಿಂದ ವಾಕ್ಯ ರಚನೆ ಮಾಡಿಸುವುದು.

• ಮಾದರಿ ಪ್ರಶ್ನೆಪತ್ರಿಕೆ

3ನೇ ಸೆಮಿಸ್ಟರ್- ತಾಂತ್ರಿಕ ಕನ್ನಡ-1 (ಕನ್ನಡಬಲ್ಲ ವಿದ್ಯಾರ್ಥಿಗಳಿಗೆ)

ಸಮಯ: 1.00 ಗಂಟೆ ಅಂಕಗಳು:30

ಸೂಚನೆ: ಕೆಳಗಿನ ಪ್ರಶ್ನೆಗಳಿಗೆ ಸೂಚನೆಗಳ ಪ್ರಕಾರ ವ್ಯಾಕರಣದೋಷವಿಲ್ಲದಂತೆ ಉತ್ತರಿಸಿ.

1. ಈ ಕೆಳಗಿನ 04 ಪ್ರಶ್ನೆಗಳಿಗೆ ಒಂದು ಪೂರ್ಣ ವಾಕ್ಯದಲ್ಲಿ ಉತ್ತರಿಸಿ.

1*4=04

- (ಅ) ನಾಟ್ಯ ಯಾವಾಗ ಹುಟ್ಟಿಕೊಂಡಿತು?
- (ಆ) ಆನೆ ಹಳ್ಳದ ಕಾಡಿನಲ್ಲಿ ನಾಪತ್ತೆಯಾದ ಹುಡುಗಿಯರ ಹೆಸರುಗಳನ್ನು ತಿಳಿಸಿ.
- (ಇ) ರಾಷ್ಟ್ರಪತಿಯಾಗಿ ಆಯ್ಕೆಯಾದಾಗ ಕಲಾಂ ಅವರು ಮೊದಲು ಹೇಳಿದ ಮಾತುಗಳೇನು?
- (ಈ) ಮಂಗಳನ ಅಂಗಳ ತಲುಪಿದ ಮೊದಲ ಅಂತರಿಕ್ಷ ನೌಕೆ ಯಾವುದು?
- (ಉ) 'ಹಗಲುಗನಸು' ನುಡಿಗಟ್ಟನ್ನು ಬಳಸಿ ಸ್ವಂತ ವಾಕ್ಯವನ್ನು ರಚಿಸಿ.
- (ಊ) 'ಸಿಹಿಕಹಿ' ಜೋಡುಪದವನ್ನು ಒಂದು ವಾಕ್ಯದಲ್ಲಿ ಬಳಸಿ.
- 2. ಕೆಳಗಿನ ಯಾವುದೇ ನಾಲು ಪ್ರಶ್ನೆಗಳಿಗೆ ಕನಿಷ್ಟ ಐದಾರು ವಾಕ್ಯಗಳಲ್ಲಿ ಉತ್ತರಿಸಿ.

4*4=16

- (1) ಕುವೆಂಪು ಅವರು ಇಂಗ್ಲಿಷ್ ಕಲಿಯುವವರನ್ನು ಎಷ್ಟು ವಿಭಾಗವಾಗಿ ಹೇಗೆ ವಿಂಗಡಿಸಿದ್ದಾರೆ?
- (2) ಕಲಾಂ ಅವರ ಯಶಸ್ವಿನ ಮಂತ್ರಗಳೇನು?
- (3) ಗಾದೆಗಳ ಮಹತ್ವವೇನು? ನಿಮಗೆ ಗೊತ್ತಿರುವ ಯಾವುದೇ ಎರಡು ಗಾದೆಗಳನ್ನು ಹೆಸರಿಸಿ.
- (4) ಸಂವಹನ ಸಂದರ್ಭದಲ್ಲಿ ಬಳಸುವ ಭಾಷೆ ಹೇಗಿರಬೇಕು?
- (5) ನೇಮಿಚಂದ್ರರ 'ಸಾವಿನತ್ತ ಒಂದು ಹೆಜ್ಜೆ' ಕತೆ ಓದಿದ ಹುಡುಗಿ ತನ್ನ ಸೋಲಿನಿಂದ ಹೊರಗೆ ಬಂದದ್ದು ಹೇಗೆ?
- (6) ಸಂದರ್ಶನ ಎಂದರೇನು? ವಿವರಿಸಿ.
- 3. ಯಾವುದೆ ಎರಡು ಪ್ರಶ್ನೆಗಳಿಗೆ ಉತ್ತರಿಸಿ.

2*5=10

- (1) ನಾಟ್ಯಕಲೆಯಲ್ಲಿ ಯಕ್ಷಗಾನ ಕಲೆ ಪ್ರಮುಖವಾದುದು. ಇದರ ಹುಟ್ಟು ಮತ್ತು ವ್ಯಾಪ್ತಿ ಬಗ್ಗೆ ತಿಳಿಸಿ.
- (2) ಮಂಗಳಯಾನದ ಮುಖ್ಯ ಉದ್ದೇಶಗಳೇನು?
- (3) 'ಮಾನವೀಯ ಮೌಲ್ಯಗಳು', ಅಂತರಜಾಲ ಎರಡರಲ್ಲಿ ಒಂದಕ್ಕೆ ಸುಮಾರು ಒಂದು ಪುಟದಷ್ಟು ಪ್ರಬಂಧ ಬರೆಯಿರಿ.
- (4) ಉದ್ಯೋಗದ ಸಂದರ್ಶನಕ್ಕೆ ಹೋಗುವಾಗ ಮಾಡಿಕೊಳ್ಳಬೇಕಾದ ಪೂರ್ವಸಿದ್ದತೆಗಳೇನು?.

ಕನ್ನಡ ಪಠ್ಯಕ್ರಮ ರಚನಾ ಹಾಗು ಪಠ್ಯಮಸ್ತಕ ಸಮಿತಿ

- ಸಂಪಾದಕೀಯ ಸಮಿತಿ:
- 1. ಶ್ರೀ ಟಿ ಎಲ್ ರವೀಂದ್ರ ಉಪನ್ನಾಸಕರು, ಸರ್ಕಾರಿ ಜಿ.ಆರ್.ಐ.ಸಿ.ಪಿ ಬೆಂಗಳೂರು.
- 2. ಶ್ರೀ ಟಿ. ತಿಮ್ಮಪ್ಪ, ಉಪನ್ಯಾಸಕರು(ಆಯ್ಕೆ ಶ್ರೇಣಿ), ಯಾಂತ್ರಿಕ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಪಾಲಿಟೆಕ್ನಿಕ್, ತುಮಕೂರು.

- ಸಲಹಾ ಸಮಿತಿಯ ಬಾಹ್ಯ ಸಂಪನ್ಮೂಲ ವ್ಯಕ್ತಿಗಳು.
- 1. ಪ್ರೊ. (ಡಾ.) ಡಿ. ಪಾಂಡುರಂಗ ಬಾಬು, ಕುಲಸಚಿವರು, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
- 2. ಪ್ರೊ. (ಡಾ.) ಅಶೋಕ್ ಕುಮಾರ್ ರಂಜರೆ, ಪ್ರಾಧ್ಯಾಪಕರು, ಪ್ರಸಾರಾಂಗ ವಿಭಾಗ, ಕನ್ನಡ ವಿಶ್ವವಿದ್ಯಾಲಯ, ಹಂಪಿ.
- 3. ಪ್ರೊ. (ಡಾ.) ಕೆ ವೈ ನಾರಾಯಣ ಸ್ವಾಮಿ, ಸಹ ಪ್ರಾಧ್ಯಾಪಕರು, ಸ್ನಾತಕೋತ್ತರ ವಿಭಾಗ, ಸರ್ಕಾರಿ ಕಲಾ ಕಾಲೇಜು, ಬೆಂಗಳೂರು.
- 4. ಪ್ರೊ. (ಡಾ.) ಜೆ ಬಾಲಕೃಷ್ಣ, ಪ್ರಾಧ್ಯಾಪಕರು ಹಾಗು ಮುಖ್ಯಸ್ಥರು, ಕನ್ನಡ ಭಾಷಾ ಅಧ್ಯಯನ ವಿಭಾಗ, ಕೃಷಿ ವಿಶ್ವವಿದ್ಯಾಲಯ, (ಜಿಕೆವಿಕೆ) ಹೆಬ್ಬಾಳ, ಬೆಂಗಳೂರು.