

END-TERM EXAMINATION

FIRST SEMESTER [BCA] DECEMBER-2007

Paper Code: BCA-105

Paper Id-20105

Subject: Programming with C

Batch: (2005-2007)

Time: 3 Hours

Maximum Marks: 75

Note: Attempt all questions. Internal choice is indicated.

- Q.1 (a) Describe the purpose of the qualities const and volatile. (3)
 (b) What do you mean by casting a value? (3)
 (c) Write six mathematical functions. (3)
 (d) How strings are printed? Explain briefly with examples. (4)
 (e) In what ways does a switch statement differ from an if statement? (4)
 (f) Differentiate between structure and union with suitable examples. (4)
 (g) Write syntax of two functions each from the following standard libraries: (4)
 (i) process.h
 (ii) stdlib.h

UNIT-I

- Q.2 Explain various looping constructs of C with suitable code segments and their relative merits and demerits. (12.5)

OR

Describe the following operators with C code (12.5)

- (i) Conditional operator
 (ii) Bitwise operators
 (iii) Comma operator

UNIT-II

- Q.3 (a) Differentiate call by value and call by reference mechanism. Write a swap function to inter change the value of two integers. (6.5)
 (b) What do you mean by Pointers to function? Write C code to calculate $\sum_{i=1}^n x^2$ (i.e. $1^2 + 2^2 + \dots + n^2$). (6)

OR

- (a) What are the various storage classes? Illustrate the use of REG class. (6.5)
 (b) Write down a C program using pointers to compute the sum of all elements stored in an array. (6)

UNIT-III

- Q.4 Explain the following with C code segments: (12.5)
 (i) Structures within structures and self referential structure
 (ii) Arrays within structures
 (ii) Structures as function parameters

OR

Write a complete C program which takes from the keyboard the student records (consisting of roll no., name, class, percentage of marks) and store these records in a file in decreasing order of then percentage of marks.

UNIT-IV

- Q.5 Write a complete C program which displays the use of two functions each from the following standard libraries: - (12.5)
 (i) string.h
 (ii) math.h
 (iii) ctype.h
 (iv) process.h

OR

What is a File pointer? Write a program to copy the contents of one file into another.

(Please write your Exam Roll No.)

Exam Roll No. 008 6012008

END TERM EXAMINATION

FIRST SEMESTER [BCA] DECEMBER-2008

Paper Code: BCA 105

Paper Id-20105

Subject: Programming with C
(Batch 2005-2008)

Time : 3 Hours

Maximum Marks :75

Note: Attempt any five questions.

- Q1. Define '20' C-keywords used in C-programming language. Explain briefly each keywords. (15)
- Q2. What do you understand by relational and logical operators used in C-programming language? Provide examples support your answer. (15)
- Q3. Write a C-program to find a palindrome string. String will be input by the user. "A palindrome string has a feature to get the same spelling read to forward or backward direction an example is 'MADAM'". (15)
- Q4. (a) Write down the differences between structure and union. (8)
(b) Write down the differences between while statement and do----- while statement. (7)
- Q5. Discuss the feature of the following headers files. (5x3=15)
(a) Stdio.h
(b) Conio.h
(c) Stdlib.h
(d) C type.h
(e) String.h
- Q6. (a) Write a C-program to multiply two matrixes, using dynamic memory allocation. (12)
(b) What do you understand by malloc and calloc functions? (3)
- Q7. Explain the following:
(a) Why does goto statement is not favourable in C-programming? (5)
(b) What are the value range of int and character data types? (3)
(c) Why does "#include" is used in C-programming. (3)
(d) What do you understand by "passing values" and "passing references" in functions? (4)
- Q8. Write short notes on any three: (5x3=15)
(a) Top-down design
(b) Bit-wise operators
(c) Array and pointer relationship?
(d) File handling
(e) Break and continue operator

END TERM EXAMINATION

FIRST SEMESTER [BCA] DECEMBER-2009

Paper Code: BCA105

Subject: Programming with C

Paper Id-20105

(Batch: 2005-2009)

Time : 3 Hours

Maximum Marks :75

Note: Q.1 is compulsory. Attempt one question from each unit.

Q1 Attempt all questions:- (10x2.5=25)

- Why C is known as middle level language?
- Explain bitwise operators.
- What is array of pointers?
- Explain ternary operator.
- What is sentinel controlled loop?
- Explain features of C language.
- Differentiate between structure and union.
- Explain two functions of process.h.
- Give the precedence of various operators in C.
- What is a macro?

UNIT-I

- Q2 (a) Explain primary data type in C language. Explain the use of comma operator with example. (3+3)
(b) Explain exit controlled loop & entry controlled loop with example. Write a program to print Fibonacci series, up to 10 terms. (3+3.5)

OR

- Q3 (a) Explain tokens of C language briefly. Explain with example const and volatile. (3+3)
(b) Explain the use of break and continue statement by giving example. Write a program to print sum of sin(x) series= $x - x^3/3! + x^5/5! - x^7/7! + \dots$ upto n terms. (3+3.5)

UNIT-II

- Q4 (a) What are various storage classes, illustrate their usage and scope. (6)
(b) Write a program using for loop, for multiplication of two matrices. Explain the use of malloc and calloc functions and also give their syntax. (3+3.5)

OR

- Q5 (a) Discuss features of 'call by value' and 'call by reference'. (6)
(b) What is recursion? Mention its benefits. Write a program to find factorial of a number using recursion. (3+3.5)

UNIT-III

- Q6 (a) Explain the use of enumerated data type by giving example. Define structure. Explain the concept of nested structure by giving example. (3+3)
(b) Write a program to determine division of students in a class using array of structures. Make a structure having fields: name, age, roll no, subject, total. The program should read record of 10 students and calculate their division according to percentage. (6.5)

OR

- Q7 (a) Explain any five file handling functions. Write a program that copies the content of one file (message.dat) to another file (new.dat). (6)
(b) What is bit field? Explain its usage. Explain pros and cons of using Union with example. (3+3.5)

UNIT-IV

- Q8 Give the general format for three functions for each header file:- (12.5)
(a) string.h (b) maths.h (c) ctype.h (d) conio.h (e) stdlib.h

OR

- Q9 (a) Give the format and example the of following library functions:- (6)
(i) Isalnum() (ii) fabs() (iii) log() (iv) fflush() (v) getch()
(b) What is meant by library in context with programming language and what is the advantage of library function? (6.5)
