2014

(2nd Semester)

BACHELOR OF COMPUTER APPLICATIONS

Course No. : 201

(Introduction to Programming Language Through C)

Full Marks : 75

Time : 3 hours

(PART : B—DESCRIPTIVE)

(*Marks* : 50)

The figures in the margin indicate full marks for the questions

1. *(a)* Write a simple C program and explain the structure of C program. 7

(b) Define variable. What are the rules for creating variables in C programming? 1+2=3

Or

(c) Explain briefly a function for printf( ) and scanf( ) with appropriate examples. 6

(d) Write a brief note on operator precedence and associativity. 4

2. (a) Explain 'break' and 'continue' statements with a complete C program. 10

Or

(b) What is nested if? Write a program for finding the largest of three given numbers using nested if. 6

(c) Explain for loop with an example. 4

3. (a) Explain and differentiate call by value and call by reference with examples. 10

Or

(b) Write a program for insertion sort. 5

(c) What is recursive function? Write a C program of factorial by using recursive function. 5

4. (a) Write a C program of function for concatenation of two strings, comparing two strings. 5+5=10

Or

(b) What is an array of pointer? Write a program to illustrate array of program and explain. 3+7=10

5. *(a)* What is structure within structure? Write C program to demonstrate structure within structure and explain in brief.

3+7=10

Or

(b) What is file? Explain any four file-handling functions giving an example each.

2+8=10

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(PART : A—OBJECTIVE)

(*Marks* : 25)

The figures in the margin indicate full marks for the questions

SECTION—A

(*Marks* : 15)

1. Put a Tick [✓] mark in the brackets provided against the correct answer : 1×10=10

(a) Which keyword is used for skipping part of the loop?

(i) Skip [ ]

(ii) Continue [ ]

(iii) Break [ ]

(iv) Jump [ ]

(b) What is the only function all C programs must contain?

(i) start() [ ]

(ii) system() [ ]

(iii) main() [ ]

(iv) include() [ ]

(c) How many times is a do-while loop guaranteed to loop?

(i) 0 [ ]

(ii) 1 [ ]

(iii) Indefinitely [ ]

(iv) Unknown [ ]

(d) Which one of the following is the correct usage of conditional operators used in C?

(i) a>b? c=30 : c=40; [ ]

(ii) a>b? c=30; [ ]

(iii) max=a>b? a>c?a:c:b>c?b:c [ ]

(iv) return (a>b)?(a:b) [ ]

(e) Which of the following adds one string to the end of another?

(i) append(); [ ]

(ii) stringadd(); [ ]

(iii) strcat(); [ ]

(iv) stradd(); [ ]

(f) Which one of the following is the proper declaration of a pointer?

(i) int x; [ ]

(ii) int &x; [ ]

(iii) ptr x; [ ]

(iv) int *x; [ ]

(g) Which one of the following gives the memory address of integer variable x?

(i) *x; [ ]

(ii) x; [ ]

(iii) &x; [ ]

(iv) address(x); [ ]

(h) The keyword used to transfer control from a function back to the calling function is

(i) switch [ ]

(ii) goto [ ]

(iii) return [ ]

(iv) break [ ]

(i) What will be the output of the following code? (Assuming that the union exist)

```
main( ) {
        union student x;
        x.a=5; x.b=7;
        printf("%d and %d", x.a, x.b);
        }
```

(i) 5 and 5 [ ]

(ii) 7 and 7 [ ]

(iii) 5 and 7 [ ]

(iv) 7 and 5 [ ]

(j) The library function used to reverse a string is

(i) strstr() [ ]

(ii) strrev() [ ]

(iii) revstr() [ ]

(iv) strreverse() [ ]

2. State whether *True* or *False* : 1×5=5

(a) The keyword used to make any variable constant is const.

( )

(b) The function use to check whether the input character is number or not is isnum().

( )

(c) Function prototypes must always ends with semi-colon.

( )

(d) The code fseek(fp, 0L, 0); will put the file pointer to the end of file.

( )

(e) Union elements occupy different memory spaces.

( )

SECTION—B

(*Marks* : 10)

3. Answer the following questions : 2×5=10

(a) Differentiate between while loop and do-while loop.

(b) Explain the relationship between pointers and arrays.

(c) How does structure differ from union?

(d) What is conditional operator? Give example.

(e) Define recursion. Give one example of recursive function.

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