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CAI-302/CPWC/C++/3rd Sem/2018/M

COMPUTER PROGRAMMING WITH C/C++

Full Marks – 70

Pass Marks – 28

Time – Three hours

The figures in the margin indicate full marks for the questions.

PART – A

Answer *all* the questions.

1. (a) Fill up the blanks : 1×10=10

(i) A collection of similar elements is known as an _____.

(ii) If A is an array then &A[0] is called _____ address of A.

(iii) The parameters used in the function call are known as _____ parameters.

(iv) _____ library function is used to read a multi-word string.

[Turn over

(v) The process of converting one data to another type is called _____ casting.

(vi) The size of a float is _____ bytes.

(vii) A step by step procedure for solving a problem is called _____.

(viii) The variable that can store many types of data is called _____ variable.

(ix) The variable whose scope is available in several functions is called _____ variable.

(x) The loop that executes the body at least once is known as _____ loop.

(b) State true or false : $1 \times 10 = 10$

(i) Debugging will become difficult while we use user defined functions in a program.

(ii) In C programming, A++ and the ++A are the same.

- (iii) The character present at the end of a string is called null character.
- (iv) A continue statement is used to stop the execution of a loop.
- (v) An array variable can store different types of value.
- (vi) A global variable cannot be accessed from all the functions in a program.
- (vii) One if statement within another if is known as nested if.
- (viii) Both getch() and getchar() library functions are the same.
- (ix) The data type of the actual and the corresponding formal parameter must be the same.
- (x) A switch() statement can be used as the replacement of multiple if statements.

(c) Choose the correct answer : $1 \times 5 = 5$

(i) Which of the following is a relational operator ?

- (a) & (b) &&
(c) || (d) >=

(ii) Which of the following cannot be checked in a switch case statement ?

- (a) Character (b) Integer
(c) Float (d) enum

(iii) The keyword used to bring the control out of a loop statement

- (a) switch (b) break
(c) go back (d) return

(iv) Which operator is a logical operator ?

- (a) * (b) &
(c) && (d) %

(v) The pow() library function is defined in

- (a) conio.h (b) Math.h
(c) stdio.h (d) dos.h

PART-B

Answer any *three* questions.

1. (a) What is a flow-chart ? Draw a flow chart for do...while loop. $2+3=5$
- (b) Write a program in C/C++ to find the sum of the series : 5
 $1 + 5 + 10 + 15 \dots + \text{up to } n^{\text{th}} \text{ term.}$
- (c) Define an algorithm. Write an algorithm to find the greatest of three integers. $2+3=5$
2. (a) What is the importance of a function ? Differentiate between function call by value and call by reference. Write a function in C to test whether a number is odd or even. $2+3+4=9$
- (b) Briefly describe the following terms in object oriented programming: $2 \times 3 = 6$
- (i) Class
 - (ii) Data encapsulation
 - (iii) Private

3. (a) Give the memory representation of a 2 dimensional array with a suitable example.

3

(b) Write a program to find the sum of the numbers between 10 and 100 which are divisible by 5.

4

(c) Create a structure containing the following information :

$2+3+3=8$

Employee no., Name, Salary and Department

Enter records for 100 employees and then display them.

4. Write short notes on any *five* : $3 \times 5 = 15$

(a) Inheritance (b) Pointer variable

(c) Break statement (d) Header file

(e) Structure (f) Compiler