October 2010

Bachelor of Computer Application (BCA) Examination

II Semester

Problem Solving & Programming with C Language-II

Time : 3 Hours] [Max. Marks : 50

Note- *Attempt all five questions. Symbols have their usual meanings. All questions carry equal marks.*

1. (a) What do you understand by passing arguments by values, and by pointer during function invocation? Explain both for a function that an int argument and adds 10 to it if it is 0, and returns the same. Write the function prototype and definition in each case.

   (b) Write a function prime that returns 1 if its arguments is a prime number and returns zero otherwise.

   OR

   (a) Distinguish between recursion and iteration.

   (b) Write a function that will round a floating point number to an indicated decimal place. For example the number 17.457 would yield the value 17.46 when ft is rounded off to two decimal places.

2. (a) Consider a one-dimensional array of chracters pointer pointing to unsorted strings. If the strings need to be sorted. What is the most efficient techniques that can be employed. What are the alternatives?

   (b) Define a structure called cricket that will describe the following information:

   Player name, team name, batting average. Using cricket, declare an array player with 50 elements and write a program to read the information about all the 50 players and print a team-wise list containing names of players with their batting averages.

   OR

   How is a member of a union variable assigned an initial value? In what ways does the initialization of a union variable differ from the initialization of a structure variable?

3. (a) What is the difference between buffered and unbuffered file I/O functions?

(b) Write a program to accept a number of filenames on the command line, concatenate them upto the penultimate file and write the concatenated contents to the last file.

OR

(a) Contrast the use of the fscanf and fprinf functions with the use of the scanf arid printf functions. How do the grammatical rules differ?

(b) Mention three difference between *a.* text file and a binary file (in DOS).

4. (a) Explain display adapter, display screens, video display modes and resolution.

(b) Which colours and fonts can you use in text mode and graphics mode.

OR

(a) How to write to VDU memory in text mode?

(b) Explain the difference between a general graphics system designed for a programmer and one designed for a specific application, such as architectural design.

5. (a) Explain different types of shapes and stylish lines that can be drawn using "C¹ language.

(b) Write a program to scan convert the interior of a specified ellipse into a solid colour.

OR

(a) Explain all the steps for designing animation sequences.

(b) Write a program to draw a circle in the centre of the screen and fill it with blue colour.

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