Pokhara University

|  |  |  |
| --- | --- | --- |
| Level: Bachelor | Semester – Fall | Year : 2012 |
| Programme: BE | | Full Marks: 100 |
| Course: Programming in C | | Pass Marks: 45 |
| Time : 3hrs. |

|  |
| --- |
| *Candidates are required to give their answers in their own words as far as practicable.* |
| *The figures in the margin indicate full marks.* |
| Attempt all the questions. |

|  |  |  |
| --- | --- | --- |
|  | 1. What is programming language? Describe Low Level Language (LLL) and High Level Language (HLL) with examples.   **OR**  Explain briefly the various generations of computers with example.   1. Define Algorithm and Flowchart. Draw a Flowchart to read 3 numbers from the user and find the smallest one. | 7  8 |
|  | 1. Define the terms operators, variable and constant with example. Explain the necessary rules to define the variables name in C programming. 2. What will be the output after executing the following Codes (assume necessary header files): 3. void main()   {  int x=10,y=20,z=5,i;  i=x\*(++y+z++)%3+y/x\*2-5;  x+=z;  y-=z;  x--;  z+=10;  z--;  printf("x=%d\ny=%d\nz=%d",x,y,z);  printf("\ni=%d",i);  }   1. void main()   {  char str[20]={"University"};  char str1[20];  strcpy(str1,"Pokhara");  printf("\n%s",str1);  strcat(str1," ");  strcat(str1,str);  printf("\n%s",str1);    strrev(str1);  printf("\n%s",str1);    } | 7  4+4 |
|  | 1. Describe the different types of decision control statements used in C programming with their syntax. 2. An electricity board charges according to the following rates:   For the first 20 units ------------- Rs 80  For the next 80 units -------------Rs 7.5 per unit  For the next 100 units ------------- Rs 8.5 per unit  For the Beyond 200 units --------Rs 9.5 per unit  and Tax 15% in total amount is charged to all users. Write a program to read number of units consumed and print out the total charges. | 8  7 |
|  | 1. What is array? Write a program to read values of 3×3 order matrix then compute the sum of even elements. 2. What do you mean by function in C programming? Distinguish between function call by value and function call by reference with an example. | 7  8 |
|  | 1. What is pointer in C? Can a function return more than one value? Justify your answer with an example. 2. Write a program with user defined function using pointer to convert all the upper case to lower case and vice-versa in a string given by the user.   **OR**  Write a program to print the Fibonacci series up to Nth term using recursive function. The Fibonacci series is 0 1 1 2 3 5 … …. | 8  7  7 |
|  | 1. Compare and contrast structure with union. Write a program enlightening how to access the nested structure components. 2. Write a program by using structure that includes AccNo, CName, CAddress, CTelNo and Balance for 100 customers of ABC financial institution and store in ***account.txt*** file and finally display the information of the customers who have the balance greater than Rs 10000. | 8  7 |
|  | Write short notes on **any two:**   1. Macros 2. String functions 3. Global versus local variable 4. File opening modes | 2×5 |