

## SARDAR PATEL UNIVERSITY

M.Sc. (Electronics) II Semester Examination

Thursday, 29<sup>th</sup> November, 2012 Time : 10.30 am to 1.30 pm

PS02CELE03 – Programming in C/C++

Total Marks – 70

(82)

1. Figure to the right indicate maximum marks for the question

Q-1

- A) By Default the real number in C language is treated as :  
 i. float  
 ii. long double  
 iii. double  
 iv. short
- B) #define X 01  
 Referring to the sample above, what is #define?  
 i. integer constant  
 ii. preprocessor macro  
 iii. Preprocessor directive  
 iv. pre-compiler integer
- C) The keyword used to transfer control back to the top of loop is  
 i. continue  
 ii. switch  
 iii. goto  
 iv. return
- D) Which one of the following variable names is NOT valid?  
 i. 52go  
 ii. X\_Y  
 iii. steps  
 iv. t\_123456
- E) In which stage the following code  
 #include<math.h>  
 gets replaced by the contents of the file math.h  
 i. during editing  
 ii. during linking  
 iii. During compiling  
 iv. during preprocessing
- F) Which of the followings is not a arithmetic operator?  
 i. <<  
 ii. +  
 iii. /  
 iv. %
- G) A local block in C language is marked with :  
 i. pair of braces  
 ii. between to dots  
 iii. Pair of curly braces  
 iv. None of the above
- H) Which is a C language statement terminator?  
 i. period  
 ii. semicolon  
 iii. Colon  
 iv. question mark

[08]

Q-2 Answer any **seven**, in short. (Two marks each)

[14]

- 1 What is type casting?
- 2 What are global variables?
- 3 What is the difference between *while* and *do-while*?
- 4 Discuss in brief about C Keywords.
- 5 Explain conditional operator with suitable example.
- 6 Differentiate between post-decrement and pre-decrement operator.
- 7 Why do we have a null character ('\0') at the end of the string?
- 8 Why function prototype declaration is required?
- 9 What is EOF?

Q-3 [a] Write a C program to generate a series of Even numbers between 200 and 300. [06]

Q-3 [b] Discuss at length, Operators precedence and its associativity in C language. [06]

OR

Q-3 [b] List various data type supported by C language. Explain built-in data types of C language with their ranges. [06]

Q-4 [a] Write a C program to read an array of 100 integer values. Program should find and print the largest of the entered values. [06]

Q-4 [b] What is derived data type? How does it differ from normal data type? Discuss at length. Enlist the merits of it. [06]

OR

Q-4 [b] Discuss about two dimensional array in C language with suitable example. [06]

Q-5 [a] Compare the text and graphics modes capabilities of C language. Show the graphics capability of C language by suitable example. [06]

Q-5 [b] Write a C program to check whether a number is palindrome or not ? e.g. 242 , 585 is palindrome. [06]

OR

Q-5 [b] Write a C language function to find and print the smallest digit of an integer number passed as an argument. Make necessary assumptions. [06]

Q-6 [a] List and discuss in details the advantages of C language. [06]

Q-6 [b] With neat circuit diagram, show how to connect a LED at parallel port of IBM PC so as when data '1' is sent LED will glow. Write a C program to turn LED On and OFF with the interval of 1 Second. Make necessary assumptions. [06]

OR

Q-6 [b] What is parallel port? Explain briefly. Enlist and describe the different functions available for interfacing parallel port using C language for various input and output jobs. [06]

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