9. (a) Write a program to check if an entered string is a palindrome or not. 7

(b) Define function. Discuss "Call by value" and "Call by reference" using example. 8

Roll No. .....

3012

B. Tech. (Common for All Branches Except CSE, ECE, IT, CS & IT and EEE)

1st Semester Examination – December, 2018

PROGRAMMING FOR PROBLEM SOLVING

Paper : ESC-CSE-102-G

Time : Three Hours] *[Maximum Marks : 75*

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt ***five*** questions in all, selecting at least ***one*** question from each Unit. Question No. **1** is ***compulsory***. All questions carry equal marks.

1. (a) Define CPU. $6 \times 2.5 = 15$

(b) List the basic input and output devices used with computer.

(c) Discuss the basic symbols used in flow-charts.

http://www.haryanapapers.com

https://www.mdupapers.com

(d) What are the key words used in C language ?

(e) State and explain the 'for' loop used in C language.

(f) What do you understand by strings ?

UNIT – I

2. Perform the following : $5 \times 3 = 15$

(i) $(89)_{10} \rightarrow (?)_2$

(ii) $(0.1101)_2 \rightarrow (?)_{10}$

(iii) $(111\,01\,01)_2 + (1011111)_2 = (?)_2$

(iv) $(111.0\,111.11011)_2 \rightarrow (?)_8$

(v) $(11011)_2 + (10100)_2 = (?)_2$

3. Discuss with a neat and clean diagram, in detail the basic functional units of a Computer. 15

UNIT – II

4. Differentiate between a flow-chart and an Algorithm. Write an algorithm to calculate simple Interest, also draw its flow chart. 15

5. Write short note on : $5 \times 3 = 15$

(i) Basic Input and Output functions

(ii) Key words

(iii) Syntax and Logical Errors

UNIT – III

6. (a) What do you understand by loops ? Discuss for loop and its syntax with example. 8

(b) Write a program that reads a number and determines if the numbers is zero, positive or negative. 7

7. (a) Differentiate between 'while' and 'do while' loop with example. 8

(b) Write a program to check if a number is even or odd. 7

UNIT – IV

8. (a) Define Array. How it is declared and initialized ? Explain using an example. 8

(b) What are recursive functions ? Write a program to find the factorial of a number using recursion. 7

http://www.haryanapapers.com

https://www.mdupapers.com