

(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 1115

Roll No.

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

B.Tech.

(SEM. I) ODD SEMESTER THEORY
EXAMINATION 2013-14
COMPUTER PROGRAMMING

Time : 3 Hours

Total Marks : 100

- Note :-** (i) There are **three** Sections. Section A carries **20** marks, Section B carries **30** marks and Section C carries **50** marks.
- (ii) Attempt all questions. Marks are indicated against each question.
- (iii) Assume suitable data, wherever necessary.

SECTION-A

1. Attempt all parts : (2×10=20)
- (a) Write in brief about the components of Central Processing Unit of a Computer.
- (b) Make the hierarchy of different memories available in a computer.
- (c) Write the difference between while and do while loop.

(d) Write output of the following :

```
printf("%d", strcmp("QUIET", "QUILT"));
```

(e) Declare and initialize three dimensional array.

(f) What do you mean by Operator Precedence ?

(g) Define double pointer with example.

(h) Write difference between implicit and explicit type casting.

(i) Define operating system with its different functions.

(j) Write difference between compiler and interpreter.

SECTION-B

2. Attempt any three parts : (10×3=30)

(a) Convert the following :

(i) $(FA1.2C)_{16} = (?)_8$

(ii) $(756)_{10} = (?)_4$

(iii) $(11011.011)_2 = (?)_{16}$

(iv) $(574.32)_8 = (?)_2$

(b) Write difference between structure and array. Write a program in 'C' to find the largest element of a 3×3 matrix.

(c) What are the different types of functions ? Write a program in C to sort list of names of students in an ascending order.

(d) Define Union. Write a program in C to find the record of a student having maximum marks from the list of 10 records.

Each record has roll no, name, class and marks fields.

- (e) Describe various storage classes supported in C, with suitable example.

SECTION-C

3. Attempt any two parts : (5×2=10)
- (a) Define algorithm and make a flow chart to find prime numbers between 101 and 999.
- (b) Write a short note on top-down program development approach.
- (c) Write a program in 'C' to print the following pattern :
- ```
1
2 3
4 5 6
7 8 9 10
```

4. Attempt any two parts : (5×2=10)
- (a) Write a program in C to copy content from one file to another file.
- (b) Write a program in C to reverse a string through pointer.
- (c) Define recursive function. Write a program in C to generate Fibonacci series (0 1 1 2 3 5 8 13 ...) using recursive function.



5. Attempt any two parts : (5×2=10)

- (a) What is the architecture of Linux Operating System ? Discuss.
- (b) Write a program in C to find the sum of individual digits in a five digit number.
- (c) Explain the following :
  - (i) Preprocessor
  - (ii) Conditional operators.

6. Attempt any two parts : (5×2=10)

- (a) Write difference between call by value and call by reference with suitable example.
- (b) Write a program in 'C' to find greatest no. among three numbers using conditional operator.
- (c) Write a short note on macros with suitable example.

7. Attempt any two parts : (5×2=10)

- (a) Differentiate between nested if and switch statements in 'C' with example.
- (b) Write a program in 'C' to sort list of 10 integers in an ascending order.
- (c) Write a program in 'C' to multiply the two matrices of M×N.