



Printed Pages : 3



NCS201

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

PAPER ID : 199225

Roll No.

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B. Tech.

(SEM. II) THEORY EXAMINATION, 2014-15
COMPUTER SYSTEM & PROGRAMMING IN C

Time : 3 Hours]

[Total Marks : 100

Note: Attempt all questions as per instructions.

- 1 Note: Attempt any FOUR parts. Each part carries equal marks. (5×4=20)
- (a) Draw the memory hierarchical structure of a computer system. Explain each memory unit in brief.
 - (b) What is an operating system? Describe the functionalities of operating system.
 - (c) Describe Compiler, interpreter, assembler? Write the names of compiler that are used in c programming.
 - (d) What do you mean by Algorithm? Explain the properties of algorithm.
 - (e) Differentiate high level and machine level language.
 - (f) What is pseudo code? Difference between flow chart and algorithm with example.

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[Contd...

(10×2=20)

- $$(v) \quad (54)_6 = (\dots)_4$$

(10×2=20)

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- (b) What are the main principles of recursion?
- (c) If $\text{int } a=2, b=3, x=0$; Find the value of $x = (++a, b+=a)$

(10×2=20)

- (a) What are the different types of Operator in C language and also write down the difference between the associatively and precedence of operators.

[Contd...]

- (10×2=20)**

- (b) What do you mean by dynamic memory allocation? Explain the following functions in detail:

- | | |
|------|--------|
| (i) | free. |
| (ii) | calloc |

- (c) Write a program to add two matrices of dimension 3×3 and store the result in another matrix.