



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

PAPER ID : 199128

Roll No.

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B. Tech.

(SEM. I) (ODD SEM.) THEORY
EXAMINATION, 2014-15

COMPUTER SYSTEM & PROGRAMMING IN C

Time : 3 Hours]

[Total Marks : 100

1 Attempt any FOUR parts : **5x4=20**

- (a) What are the classifications of computer?
Explain any two in detail.
- (b) Describe the functionalities of an operating system.
- (c) Convert the hexadecimal number $A9C5.DB4_{(16)}$ to octal number.
- (d) Draw a flowchart to find the sum and reverse of a given number.
- (e) Discuss the various functionalities of compiler, linker and loader.
- (f) What is storage class? Describe automatic, register, static and external with neat syntax.

2 Attempt any TWO parts : **10x2=20**

- (a) Describe about the basic components of computers with a neat block diagram.
- (b) Explain logical and bit operators with example.
- (c) Write about the formatted and unformatted Input / Output functions in 'C'.

3 Attempt any TWO parts : **10x2=20**

- (a) Describe about the types of looping statements in 'C' with necessary syntax.
- (b) Write a C program to find the multiplication of two matrices.
- (c) What are the types of function? Write a C program to find the factorial of a given number using recursion.

4 Attempt any TWO parts : **10x2=20**

- (a) How to declare an array? Explain about various operations of an array.
- (b) What is enumerated data type? Write a C program to display months in the year using enum.
- (c) Differentiate structure and union in 'C'. Write a C program to store the student details using union.

5 Attempt any TWO parts :

10x2=20

- (a) State the features of pointers. Write a 'C' program to sort a given number using pointers.
- (b) What is the difference between break and continue in C ? Describe the structure of switch-case with neat example.
- (c) List out various file operations in 'C'. Write a C program to count the number of characters in a file.