BTS-II(R)&I(S)-05.16-0768 Reg.No. | | | | | | | | | D

B.Tech. Degree II Semester Regular and I Semester Supplementary Examination May 2016

IT/CS/EC/CE/EE/ME/SE 1101 B / 1201 A COMPUTER PROGRAMMING

(*2015 Scheme*)

Time : 3 Hours Maximum Marks : 60

PART A

(Answer *ALL* questions)

(10 × 2 = 20)

1. (a) Briefly describe the functions of Linker and Loader.

(b) Write an algorithm or flowchart to find the sum of **any N numbers**.

(c) Write a C program to count number of characters in a string.

(d) What is the output of the following program?

```
#include<stdio.h>
main()
{
int a = 10, b = 6;
int c = a*b++;
printf("%d%d%d", a, b, c);
int d = a* ++ b;
printf("%d%d%d", a, b, d);}
```

(e) What is the Library function used for random number generation? Explain it with an example program.

(f) What is the output of the following program?

```
#include<stdio.h>
main()
{ int *p;
*p = 5;
printf(%d,* p);}
```

. Justify the answer with necessary explanation.

(g) In the following enumeration declaration, determine the value of each member

enum Day {Sunday=2, monday=0, tuesday, Wednesday};

(h) "Argument can be accessed within main () declaration as any other argument to a function". Comment on this statement.

(i) Explain 'fseek' with an example program.

(j) Briefly explain the difference between structure and union.

(P.T.O.)

PART B

$(4 \times 10 = 40)$

II. Describe the basic building blocks of a digital computer. (10)

OR

III. Explain the 3 basic design tools with examples. (10)

IV. Compare the features of Pretest and PostTest statements. Explain it with example program. (10)

OR

V. (a) Write a C program to check whether a given number is an Armstrong number. (5)

(b) Implement a Calculator to perform addition, subtraction and multiplication for a given set of numbers using a menu driven C program. (5)

VI. Compare Linear searching and Binary searching. Write a C program to search for an element in an array using Binary searching algorithm. (10)

OR

VII. (a) Write a recursive function for finding the value of n^{th} Fibonacci number. (5)

(b) Create a structure for storing Complex numbers (Complex number consists of real part and imaginary part). Write a program to find the sum of two complex numbers. (5)

VIII. (a) Write a C program to find the product of two 2D matrices using pointers. (6)

(b) Explain the library functions used for Dynamic memory allocation. (4)

OR

IX. (a) What are the various File handling operations? (4)

(b) Write a C program that counts the number of characters and number of lines in a file. (6)

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