00833

Printed Pages—4 **CS—101**

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

PAPER ID : 1001 Roll No. | | | | | | | | | | |

B.Tech.

CARRY OVER PAPER EXAMINATION, 2005-2006

COMPUTER AND LANGUAGES

Time : 2 Hours *Total Marks : 50*

Note : *(i) Answer **ALL** questions.*

(ii) In case of numerical problems assume data wherever not provided.

(iii) Be precise in your answer.

1. Attempt *any four* of the following : **(3x4=12)**

(a) What are different types of buses? Explain them in brief.

(b) How the term multiprogramming and time sharing interlinked ?

(c) Why is an Operating System sometimes called a control Program ?

(d) What do you understand by the term "external fragmentation" ? Why does DOS not resort to external fragmentation ?

(e) What are short-cut files ? How will you change the icon associated with short cut file ?

(f) Define the terms 'filter' and 'pipes'. How filters and pipes work ?

2. Attempt *any four* of the following : **(3x4=12)**

(a) Explain the following set options in context of Vi editor :

(i) Showmatch (sm)

(ii) Wrapscreen (ws)

(iii) Tab stop (ts)

(b) Describe the salient features of UNIX.

(c) How are static IP addresses different from dynamic IP addresses ?

(d) What is a proxy server ? How will you change the proxy setting of your IE browser ?

(e) Write short notes on the following :

(i) List Server

(ii) Daemons

(f) What are folders ? Name default folders of PINE. How will you add a new folder ?

3. Attempt *any four* of the following : **(3x4=12)**

(a) What are the differences between compiling and interpreting a computer program ?

(b) Draw a flowchart for calculating factorial of a given number N.

(c) Explain procedures and functions. How do they differ from each other ?

(d) The final velocity v (m/sec) of a moving body in the upward direction under gravity is given by $v = \left(u^2 - 2gh\right)^{\frac{1}{2}}$. Where u is the initial velocity (m/sec) and g is acceleration due to gravity ($9.8 m/sec^2$). Write a program to evaluate the final velocity at a particular height, given the values of u and g. The program should provide the flexibility to the user to select his own height.

(e) What are data types ? Differentiate between fundamental and derived data types.

(f) Determine the value of each of the following logical expression if :

a=5 ; b=10 ; and c= −6 ;

(i) a= =c || b>a

(ii) b>15 && c<0 || a>0

(iii) (a/2.0 = = 0.0 && b/2.0 !=0.0) || c<0.0

4. Attempt *any two* of the following : **(7x2=14)**

(a) (i) Explain the difference between a function declaration and a function definition. When is a function declaration required ?

(ii) Determine the output that will be generated by the following C-program

```
# include <stdio.h> main ( )
{ int x,y,z, max ;
printf ("\n Enter value of x,y, and z") ;
scanf ("%d %d %d", &x, &y, &z) ;
max = large (x,y) ;
printf ("\n maximum no is % d", large (z,max));
}
large (int a, int b)
{
int c ;
if (a>=b)
c=a ;
else
c=b ;
return (c) ;
}
```


(b) How can you manipulate 2-D character arrays using pointers ? Explain with a program.

(c) Define a structure that can describe a hotel. It should have member that include the name, address, grade, average room charge, and number of rooms. Write functions in C to perform the following operations :

(i) To print out hotels of a given grade in order of charges.

(ii) To print out hotels with room charges less than a given value.

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