

(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)
- What are different types of buses? Explain them in brief.
 - How the term multiprogramming and time sharing interlinked ?
 - Why is an Operating System sometimes called a control Program ?
 - What do you understand by the term "external fragmentation" ? Why does DOS not resort to external fragmentation ?
 - What are short-cut files ? How will you change the icon associated with short cut file ?
 - 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 (9.8m/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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