

SDM COLLEGE OF ENGINEERING AND TECHNOLOGY, DHARWAD Department of Computer Science and Engineering Staff Student Association (SSA) Activity

## **C** Proficiency Test

**Towards Placement Preparation** 

## Date: 3-03-2023

Venue: DBMS Lab

### Participants: III and VI Semester CSE Students

**Event Coordinators** 

Dr. Vidyagouri B Hemadri Prof. Nita Kakhandaki **SSA Coordinators** 

Prof. Anand S P \_ Prof. Indira R Umarji

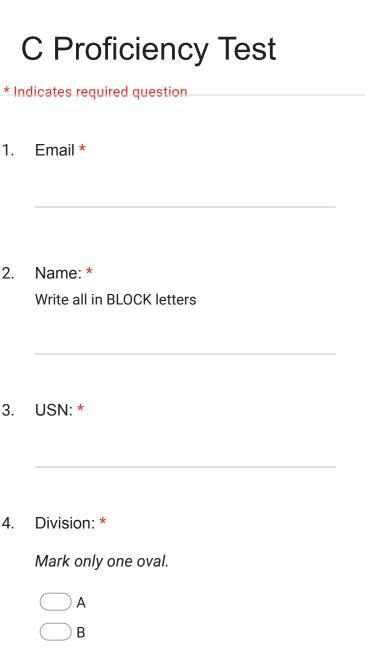
HoD CSE Dr. S.W.Joshi



2.

3.

4.



Consider the following C program.

The output of the program is \_\_\_\_\_. Mark only one oval.

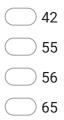


Consider the following C functions.

```
int fun1(int n) {
   static int i = 0;
   if (n > 0) {
      ++i;
      fun1(n-1);
   }
  return(i);
}
```

```
int fun2(int n) {
   static int i = 0;
   if (n > 0) {
      i = i + fun1(n);
      fun2(n-1);
   }
  return(i);
}
```

The return value of fun2(5) is \_\_\_\_\_.



Consider the following C functions.

```
int tob(int b, int* arr){
                              int pp(int a, int b) {
   int i;
                                   int arr[20];
   for(i=0; b>0; i++) {
                                   int i, tot = 1, ex, len;
      if(b%2) arr[i]=1;
                                   ex = a;
      else arr[i]=0;
                                   len = tob(b,arr);
      b = b/2;
                                   for(i=0; i<len; i++) {</pre>
   }
                                       if(arr[i]==1)
                                         tot = tot * ex;
   return(i);
                                      ex = ex * ex;
}
                                   }
                                   return(tot);
                               }
```

The following C program is executed on a Unix/Linux system:

```
#include <unistd.h>
int main()
{
    int i;
    for (i=0; i<10; i++)
        if (i%2 == 0) fork();
    return 0;
}</pre>
```

The total number of child processes created is \_\_\_\_\_.

Mark only one oval.

## Consider the following C program:

```
#include <stdio.h>
int jumble(int x, int y){
    x=2*x+y;
    return x;
}
int main(){
    int x=2, y=5;
    y=jumble(y,x);
    x=jumble(y,x);
    printf("%d \n", x);
    return 0;
}
```

The value printed by the program is \_\_\_\_\_.

Mark only one oval.

Consider the following C function.

```
void convert(int n){
    if(n<0)
        printf("%d",n);
    else {
            convert(n/2);
            printf("%d",n%2);
        }
}</pre>
```

Which one of the following will happen when the function convert is called with any positive integer n as argument?

Mark only one oval.

It will print the binary representation of n and terminate

It will print the binary representation of n in the reverse order and terminate

It will print the binary representation of n but will not terminate

It will not print anything and will not terminate

11. 7. The value displayed after the program execution is \_\_\_\_\_

Consider the following C program:

```
#include <stdio.h>
int r(){
    static int num=7;
    return num--;
}
int main(){
    for (r();r();r())
        printf(``%d",r());
    return 0;
}
```

- 41
  52
  63
- 630

Consider the following C program:

```
#include <stdio.h>
int main(){
   float sum = 0.0, j = 1.0, i = 2.0;
   while (i/j > 0.0625){
        j = j + j;
        sum = sum + i/j;
        printf("%f\n", sum);
   }
   return 0;
}
```

The number of times the variable sum will be printed, when the above program is executed, is \_\_\_\_\_\_.

Mark only one oval.

Consider the following C program:

```
#include <stdio.h>
int main()
{
    int a[] = {2, 4, 6, 8, 10};
    int i, sum = 0, *b = a + 4;
    for (i = 0; i < 5; i++)
        sum = sum + (*b - i) - *(b - i);
    printf ("%d\n", sum);
    return 0;
}</pre>
```

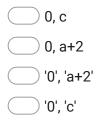
```
The output of the above C program is _____.
```



Consider the following C program.

```
#include<stdio.h>
struct Ournode{
    char x,y,z;
};
int main() {
    struct Ournode p = {'1', '0', 'a'+2};
    struct Ournode *q = &p;
    printf ("%c, %c", *((char*)q+1), *((char*)q+2));
    return 0;
}
```

The output of this program is:



```
Consider the following C program:
#include <stdio.h>
int counter = 0;
int calc (int a, int b) {
    int c;
    counter++;
    if (b==3) return (a*a*a);
    else {
        c = calc(a, b/3);
        return (c*c*c);
    }
}
int main () {
    calc(4, 81);
    printf ("%d", counter);
}
```

The output of this program is \_\_\_\_\_.

Mark only one oval.

Consider the following C program:

```
#include<stdio.h>
void fun1(char *s1, char *s2){
     char *tmp;
     tmp = s1;
     s1 = s2;
     s2 = tmp;
}
void fun2(char **s1, char **s2){
     char *tmp;
     tmp = *s1;
     *s1 = *s2;
     *s2 = tmp;
}
int main() {
     char *str1 = "Hi", *str2 = "Bye";
     fun1(str1, str2); printf("%s %s ", str1, str2);
     fun2(&str1, &str2); printf("%s %s", str1, str2);
     return 0;
}
```

The output of the program above is

Mark only one oval.

Hi Bye Bye Hi Hi Bye Hi Bye Bye Hi Hi Bye Bye Hi Bye Hi

Consider the following program written in pseudo-code. Assume that x and y are integers.

```
Count(x,y) {
    if (y != 1) {
        if (x != 1) {
            print("*");
            Count(x/2, y);
        }
        else {
            y = y-1;
            Count(1024, y);
        }
    }
}
```

The number of times that the print statement is executed by the call Count(1024,1024) is \_\_\_\_\_.

- 1024
  1023
  10230
- 010240

Consider the C code fragment given below.

```
typedef struct node {
    int data;
    node* next;
} node* next;
void join(node* m, node* n){
    node* p = n;
    while(p->next != NULL) {
        p = p->next;
    }
    p->next = m;
}
```

Assuming that m and n point to valid NULL-terminated linked lists, invocation of join will

2 14 3

- append list m to the end of list n for all inputs
- either cause a null pointer dereference or append list m to the end of list n
- cause a null pointer dereference for all the inputs
- \_\_\_\_ append list n to the end of list m for all inputs

19. 15. The following code snippet prints \_\_\_\_\_

```
#include <stdio.h>
```

Consider the following C program:

```
#include <stdio.h>
int main(){
    int arr[]={1,2,3,4,5,6,7,8,9,0,1,2,5}, *ip=arr+4;
    printf("%d\n", ip[1]);
    return 0;
}
```

The number that will be displayed on execution of the program is \_\_\_\_\_\_.

Mark only one oval.

#### 21. 17

Consider the following two functions.

```
void fun1(int n) {
    if(n == 0) return;
    printf("%d", n);
    fun2(n - 2);
    printf("%d", n);
}
void fun2(int n) {
    if(n == 0) return;
    printf("%d", n);
    printf("%d", n);
    printf("%d", n);
}
```

The output printed when fun1 (5) is called is Mark only one oval.

53423122233445
 53423120112233
 53423122132435
 53423120213243

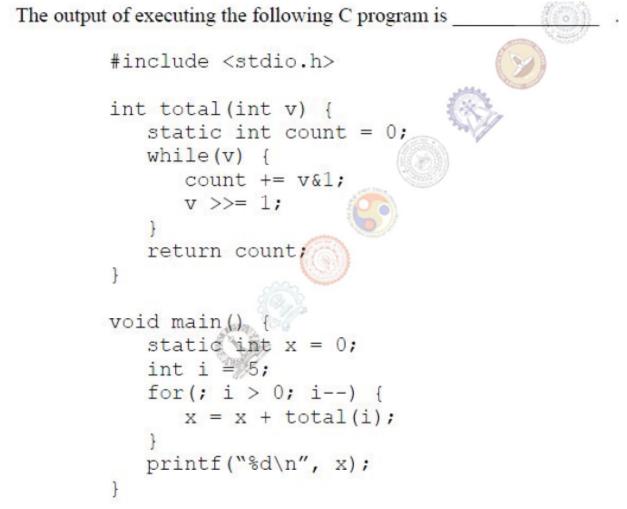
```
Consider the C functions foo and bar given below
    int foo (int val) {
        int x = 0;
        while (val > 0) {
            x = x + foo (val--);
        }
        return val;
    }
    int bar (int val) {
        int x = 0;
        while (val > 0) {
            x = x + bar (val-1);
        }
        return val;
    }
```

Invocations of foo (3) and bar (3) will result in :

- Return of 6 and 6 respectively
- Infinite loop and abnormal termination respectively
- Abnormal termination and Infinite loop respectively
- Both terminating abnormally

```
Consider the following C program.
#include <stdio.h>
#include <stdio.h>
#include <string.h

void printlength(char *s, char *t) {
    unsigned int c = 0;
    int len = ((strlen(s) - strlen(t)) > c) ? strlen(s): strlen(t);
    printf("%d\n", len);
}
void main() {
    char *x = "abc";
    char *y = "defgh";
    printlength(x,y);
}
The output of the program is _____.
Mark only one oval.
```



Mark only one oval.

23
22
19

```
25. 21
```

1-1-1-1
1111
1-11-1
11-1-1

#### 26. 22

```
What is the output of the following:
main ()
{
    int x, y, z;
    x=y=z=-1;
    z= ++x&&++y&&++z;
    printf ("x=%dy=%dz=%d\n",x,y,z);
}
```

Mark only one oval.

000
 010
 0-10
 00-1

```
How many times the statement gets printed?
main ()
{
    int i;
    printf ("In the year of 2020",x,y,z);
    for (i=1; i<=10; i++)
        main();
}</pre>
```

Mark only one oval.

10 times
Infinite times
Error: main cannot be called in itself
20 times

```
28.
     24
     What gets printed for the following code?
     main ()
     {
            auto int i=10;
            register int j=20;
            printf ("%d %d ",i, j);
            change();
            printf ("%d %d",i, j);
     }
     change ()
     {
            auto int i=100;
            register int j=200;
            printf ("%d %d",i, j);
     }
     Mark only one oval.
           10 20 100 200 10 20
           10 20 10 20 10 20
           10 20 100 200 100 200
```

10 20 10 20 100 200

https://docs.google.com/forms/d/1rZBC\_BY-QzvF7pahXth\_6zEX9d8BZUMhK0zzhK5b1Mc/edit?ts=649bc569

```
What is the output of the following?

main ()

{

int arr[]= {0, 1, 2, 3, 4};

int i, *ptr;

for(ptr=arr+4, i=0; i<=4; i++)

printf ("%d", ptr[-i]);

}

Mark only one oval.

Compile time error

Run time error
```

01234

43210

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C Proficiency Test

# C Proficiency Test - 6th Sem (Placement Perspective)

Department of CSE, SDMCET, Dharwad

rashmi.rathanikar@gmail.com Switch account

 $\odot$ 

\* Indicates required question

Email \*

Your email

Name: \*

Your answer

USN: \*

Your answer

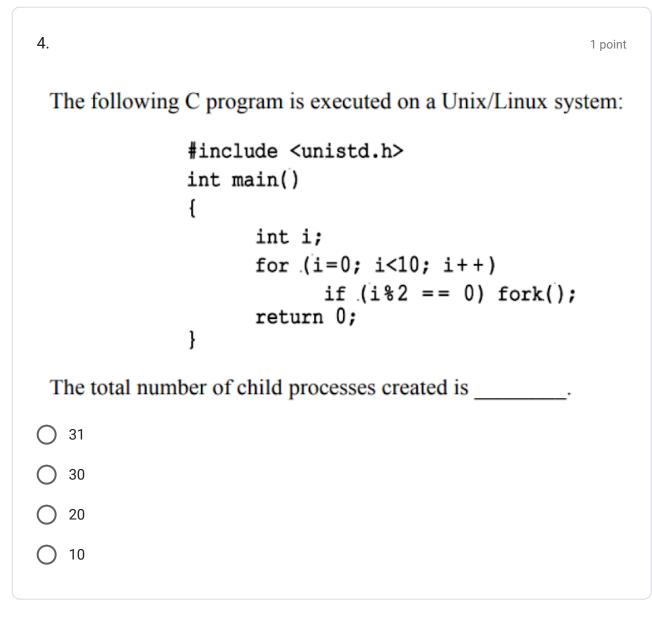
Division: *	
() A	
ОВ	
	(/

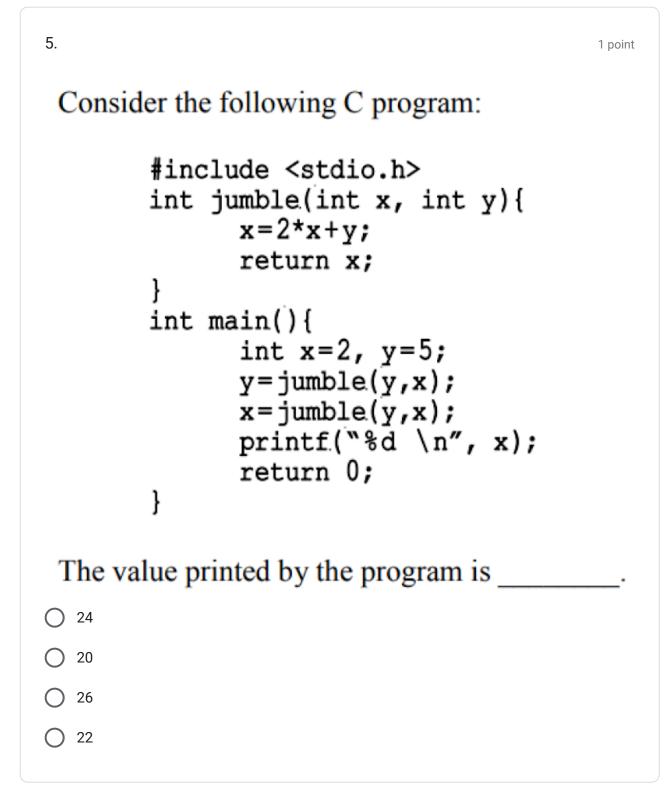
Mobile Number: *
Your answer
<b>1</b> . 1 point
Consider the following C program.
#include <stdio.h></stdio.h>
int main() {
int a[4][5]={{1, 2, 3, 4, 5},
$\{6, 7, 8, 9, 10\},\$
$\{11, 12, 13, 14, 15\},\$
{16, 17, 18, 19, 20}};
printf("%d\n", *(*(a+**a+2)+3));
return(0);
}
The output of the program is
0 19
O 20
0 14
6

```
2.
                                                              1 point
   Consider the following C functions.
    int fun1(int n) {
                                       int fun2(int n) {
      static int i = 0;
                                          static int i = 0;
      if (n > 0) {
                                          if (n > 0) {
         ++i;
                                             i = i + funl(n);
         fun1(n-1);
                                             fun2(n-1);
      }
                                          }
      return(i);
                                          return(i);
    }
                                        }
 The return value of fun2(5) is _____.
   42
   55
   56
   65
```

```
1
```

3. 1 point Consider the following C functions. int tob(int b, int\* arr){ int pp(int a, int b) { { int arr[20]; int i; = 0; for(i=0; b>0; i++) { int i, tot = 1, ex, ] if(b%2) arr[i]=1; ex = a;n1(n); else arr[i]=0; len = tob(b,arr); b = b/2;for(i=0; i<len; i++) {</pre> } if(arr[i]==1) return(i); tot = tot \* ex;ex = ex \* ex;} } return(tot); } The value returned by pp (3, 4) is \_\_\_\_\_. 88 91 71 81





6. 1 po	int
Consider the following C function.	
<pre>void convert(int n){     if(n&lt;0)         printf(``%d",n);     else {         convert(n/2);         printf(``%d",n%2);     } }</pre>	
Which one of the following will happen when the function convert is called with an positive integer n as argument?	ıy
O It will print the binary representation of n and terminate	
O It will print the binary representation of n in the reverse order and terminate	
O It will print the binary representation of n but will not terminate	
O It will not print anything and will not terminate	

```
7.
                                             1 point
Consider the following C program:
            #include <stdio.h>
            int r(){
                  static int num=7;
                  return num--;
            }
            int main(){
                  return 0;
            }
  41
  52
  63
  630
```

1 point

```
Consider the following C program:
```

```
#include <stdio.h>
int main(){
   float sum = 0.0, j = 1.0, i = 2.0;
   while (i/j > 0.0625){
        j = j + j;
        sum = sum + i/j;
        printf("%f\n", sum);
   }
   return 0;
}
```

The number of times the variable sum will be printed, when the above program is executed,





```
9.
                                               1 point
 Consider the following C program:
    #include <stdio.h>
    int main()
    ł
       int a[] = {2, 4, 6, 8, 10};
       int i, sum = 0, *b = a + 4;
       for (i = 0; i < 5; i++)
              sum = sum + (*b - i) - *(b - i);
       printf ("%d\n", sum);
       return 0;
    }
The output of the above C program is _____
 ) 12
  14
 ) 10
9
```

```
10.
                                                              1 point
 Consider the following C program.
 #include<stdio.h>
 struct Ournode{
      char x,y,z;
 };
 int main() {
      struct Ournode p = \{ '1', '0', 'a'+2 \};
      struct Ournode *q = &p;
      printf ("%c, %c", *((char*)q+1), *((char*)q+2));
      return 0;
 }
 The output of this program is:
 ) 0, c
  0, a+2
   '0', 'a+2'
 ) '0', 'c'
```

1 point

11.
Consider the following C program:
<pre>#include <stdio.h></stdio.h></pre>
<pre>int counter = 0;</pre>
<pre>int calc (int a, int b) {     int c;</pre>
<pre>counter++; if (b==3) return (a*a*a); else { c = calc(a, b/3); return (c*c*c); }</pre>
<pre>int main () {     calc(4, 81);     printf ("%d", counter); }</pre>
The output of this program is
5
O 4
O 3
O 2

0

```
12.
 Consider the following C program:
 #include<stdio.h>
 void fun1(char *s1, char *s2){
       char *tmp;
       tmp = s1;
       s1 = s2;
       s2 = tmp;
 }
 void fun2(char **s1, char **s2){
       char *tmp;
       tmp = *s1;
       *s1 = *s2;
       *s2 = tmp;
 }
 int main(){
       char *str1 = "Hi", *str2 = "Bye";
       fun1(str1, str2); printf("%s %s ", str1, str2);
       fun2(&str1, &str2); printf("%s %s", str1, str2);
       return 0;
 }
 The output of the program above is
   Hi Bye Bye Hi
   Hi Bye Hi Bye
   Bye Hi Hi Bye
   Bye Hi Bye Hi
```

1 point

13. 1 point Consider the following program written in pseudo-code. Assume that x and y are integers. Count(x,y) { if (y != 1){ if (x != 1) { print("\*"); Count(x/2, y);} else { y = y - 1;Count(1024, y); } } } The number of times that the print statement is executed by the call Count (1024, 1024) is \_\_\_\_\_. 1024 1023 10230 10240

```
1
```

14. 1 point Consider the C code fragment given below. typedef struct node { int data; node\* next; } node; void join(node\* m, node\* n) { node\* p = n;while (p->next != NULL) { p = p - > next;p->next = m; } Assuming that m and n point to valid NULL-terminated linked lists, invocation of join will append list m to the end of list n for all inputs either cause a null pointer dereference or append list m to the end of list n cause null pointer dereference for all the inputs append list n to the end of list m for all inputs

```
1
```

15.	1 point
The following code snippet prints	
<pre>#include <stdio.h></stdio.h></pre>	
<pre>int main() {     char c[]="SDME2020";     char *p=c;     printf("%s",p+p[3]-p[1]);     return 0; }</pre>	
O SDME	
O DME2020	
O 2020	
O SDME2020	

Page 1 of 1

Submit

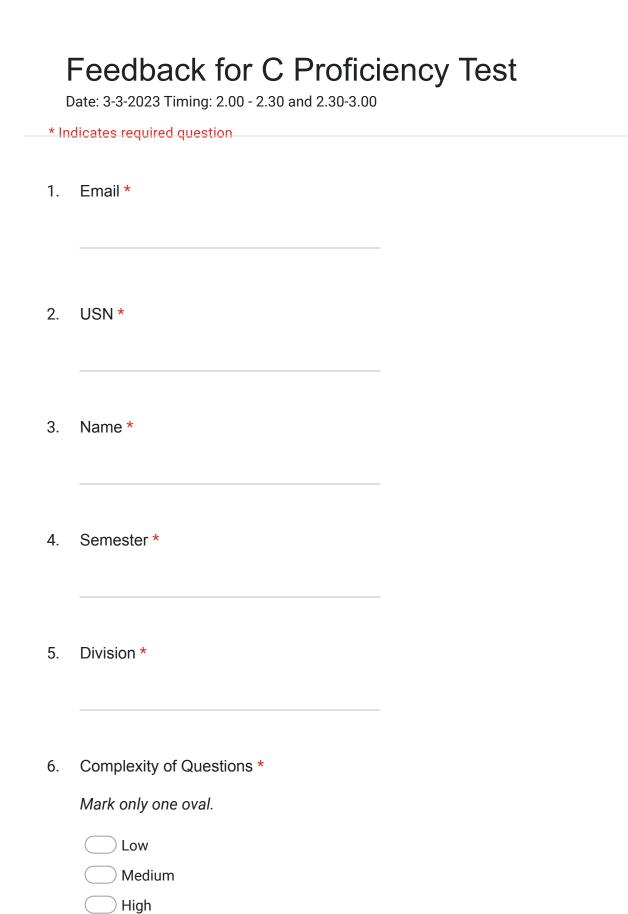
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:



7. Was it useful? \*

Mark only one oval.

Yes

8. Remarks/Suggestions \*

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### Feedback for C Proficiency Test

89 responses

**Publish analytics** 

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	USN		
	89 responses		
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	2SD20CS002		
	2SD21CS078		
	2SD20CS104		
	2sd21cs124		
	2SD20CS005		
	2SD20CS084		
	2SD20CS031		
	2SD21CS007		
	2SD21CS071		
	2SD21CS063		
	2SD20CS103		
	2SD20CS125		
	2SD20CS089		
	2SD20CS072		
	2SD21CS107		
	2SD20CS015		
	2SD21CS016		
	2SD21CS095		
	2SD21CS074		1

2SD21CS122

2SD21CS032

2SD20CS035

2SD21CS040

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2SD21CS031

2SD20CS014

2SD21CS407

2SD20CS032

2SD21CS046

2SD20CS063

2SD20CS007

2SD20CS050

2SD20CS066

2SD20CS117

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2SD21CS051

2SD20CS122

2SD21CS076

2SD20CS074

2SD21CS406

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2SD20CS042

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2SD21CS109

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2SD21CS120

2SD21CS405

2SD21CS083

2SD21CS003

2SD20CS046

2SD20CS009

2SD21CS061

2SD20CS054

2SD21CS087

2SD21CS411

2SD21CS103

2SD21CS410

2SD21CS052

Name	
89 responses	
Amogh Oodanal	
Aachan kulkarni	
Samarth Dambalkar	
Siddaram	
Vrishabh waddin	
Abushekh	
Rajkumar uppar	
BHARATESH NAGARAJ LABHAGOND	
Aditya Gupta	
Rahul V Bandekar	
Prajwal G Hoolageri	
Shrusti Shetty	
Vinyas LS	
Sahana Kulkarni	
Pooja Mugad	
Sumedha Bhat	
Amulya Naik	
Ankit Ronad	
Shridhari Hegde	
Reenad Badbade	

Bhagyashree
-------------

Vishwanath

DILER KHAN RASHEED KHAN BIRADAR

C S Dhanyashree

Kalidas Mahamuni

Ashwini. H. Shiggavi

Naveen Hegde

Devendra kundur

Amrit Kumar Singh

Rahul shet

Bhavana Borah

Suparna Kulkarni

Nikitha Sambargi

Aishwarya Itagi

Lavanya Kulkarni

Omkar Yadal

Trupti

Prateek Desai

Mandira Rao

Vijay Ravindra Yaragatti

Sahitya Nayak

Prajwal KG

Pavitra Joshi

Abhishek D

Hussnain

Swati

Mitali Hugar

ANURAG G DESHPANDE

Sammita KS

Pragati

Akshata B Korlahalli

Apoorva

Niveditha Pise

Vatsala Kaashyap

Sandeepa H A

Bhoomika Prabhu

Sanju Juttannavar

Spandana Sridhar Joglekar

Anusha Shashidhar Raibagi

G B DEEPIKA

Supriya Ramachandra Bhagwat

Manojkumar M J

Khushi Mahajan

Madhu Hanamagoudar

Aman Shetty

Anirudha Joshi

Khushi Mahesh Amate

Naman Kabadi

Abhay Itagi

Basavaraj S Bingeri

karra Rahul

Rohith S S

Anusha

Adishree Shrikant Nayak

madhu Bakale

Vishal

Noor Mohammed Sadiq Doddamani

Sana A N

Abhishek kambi

K.Bhoomika

Akshata reddy

Panchami shetty

Meeth Sakaria

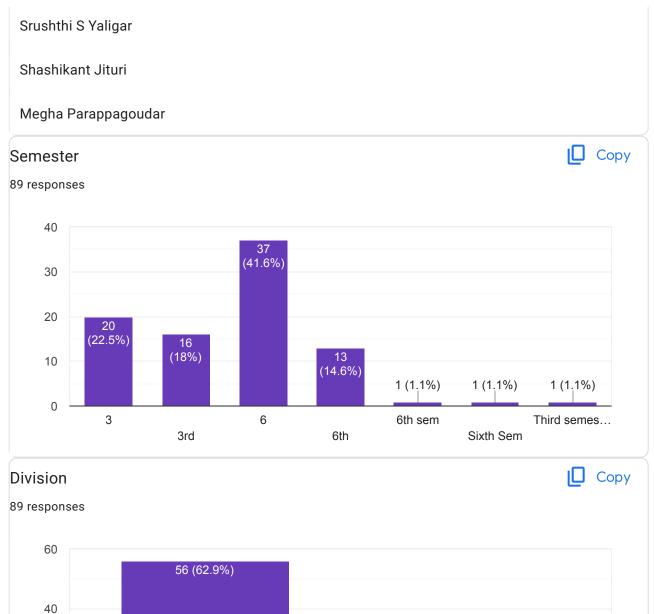
Sharayu Vijay Hulle

Vaibhavi J Patil

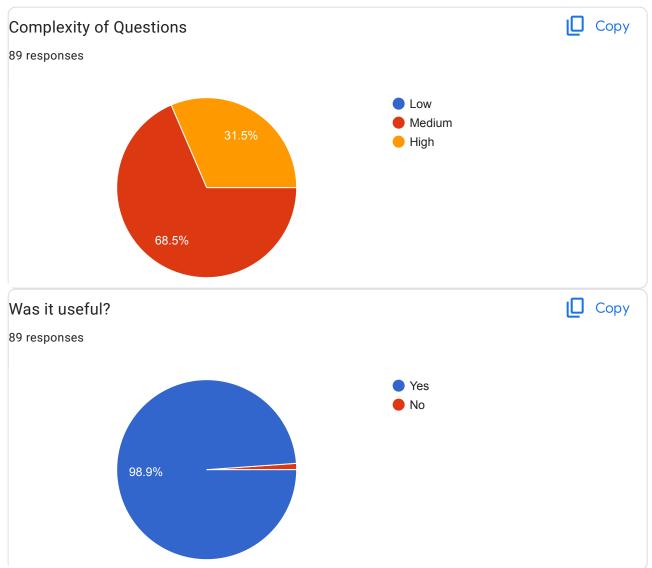
0

33 (37.1%)

В



А



Remarks/Suggestions	
89 responses	
Good	
Νο	
-	
None	
Good	
It was useful	
No suggestions.	
Can be conducted once every two months	
Yhhgucg	
All good	
Conduct many more tests.	
It was a good experience of such type of questions	
More sessions to be conducted	
Conduct them frequently	
Good afternoon mam , C test was usefulbut the time was not sufficient	
It was useful and test should be frequently conducted	
.good.	
Questions asked were of high level	
It was useful	(

It was helpful

IT WAS AN EXCELLENT EXPERIENCE .

It would be more useful if we can get the solutions

The test was really a good experience to witness the complexity of questions that are asked during the placements . Overall , it was an amazing experience throughout.

attends of students should be displayed

Need more of these.

With MCQ it would be better to add some hand on programming

Good practise test

Useful for students during placement rounds.

It helped in evaluating ourselves i.e test has made it clear the areas we need to dig in more

I request you to take technical aptitude step by step as in first test should be basics of c next test a little complex questions.. it'll really help us to know the concept in which we are weak.. also we need a answer discussion session done for all the papers .. by this we will understand how to approach the question..

Questions were very high level. Start from some low level questions and then move on to high level.

Start with the basic level of questions

It was a good experience.

Do more of these

It was really good and helpful!! Try organizing these in successive levels of difficulty!!!

Everything was good and went well.

It was a good experience writing this exam , conducted in a very well manner and according was very useful to brush up many concepts which we had learnt in the past semesters

It helps us during interviews if we start to give such tests now onwards

We need improvement in pointer arithmetics

More such test should be taken.

May be some answers are wrong, please once verify it .

Was great experience

It was great

Please provide the answers

It is a good experience and also I expect these tests in the future also

Please take such tests repeatedly.

No remarks

The questions was amazing and useful.

The question were same as question given to our seniors, if you will conduct the quiz next time then change the questions

Nothing

It was very good preparation for pre-placement

It was a well organised test

Conduct such test which are helpful to Placements.

Key answer given are not correct

It was helpful for our placements.

Overall the activity was helpful

No Suggestions Everything is Fine

Nil

Teach us solving such questions

Helpful

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Test was very helpful.

Plz Teach the concepts

Help us to solve the questions given in this test.

Some more guidance should be given

It was good overall

Conduct more tests like this

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#### Department of Computer Science and Engineering Report on C Proficiency Test

Organized by	Department of Computer Science and Engineering, SDMCET,Dharwad In association with Student Staff Association
Date	03-03-2023
Time	3 pm -3.30 pm
Target audience	III Semester and VI semester students of CSE department
Event Coordinators	Dr.Vidyagouri K Prof.Nita Prof.Indira Prof.Rashmi Patil
Event Name	C Proficiency Test(towards placement preparation)
Mode of Conduction	Off line - Lab 1
Number of students attended	III semester - 140 VI semester - 126
Event Outcomes	<ul> <li>Exposure to Basic concepts of C programming</li> <li>Emphasis on Problem Solving ability and logic development</li> <li>Industry readiness</li> </ul>