



JK LAKSHMIPAT UNIVERSITY, JAIPUR

INSTITUTE OF ENGINEERING AND TECHNOLOGY

End Term Examination (Regular/ Backlog), April-May 2015

B. Tech in Computer Science Engineering, Semester II

Roll No.....

CSE201: COMPUTER PROGRAMMING

Time: 3 hours

Max. Marks: 100

Instructions to students:

1. Do not write anything other than your roll number on question paper.
2. Assume suitable data wherever required and mention it clearly.
3. Writing appropriate units, nomenclature, and drawing neat sketches/schematics/ flow chart wherever, required are an integral part of the answer.

Q.1A Objective type multiple choice questions (10 questions @ 1 mark)

10

- i. Which of the following is used to display integer using printf statement; (a) %d (b) %i (c) %id (d) %int
- ii. Which of the following function can be utilized to accept a string with space from a user? ; (a) scanf (b) getstr (c) gets (d) getstring
- iii. Which of the following is not a predefined datatype?; (a) void b) enum (c) pointer (d) long double
- iv. The keyword used to transfer control from a function back to the calling function is
a) switch; b) goto; c) go back; d) return
- v. Which of the following is ASCII Representation of A?
a) 01000001; b) 00000001; c) 11000001; d) 01100001
- vi. Represent $(876)_8$ to HexaDecimal Value.
- vii. What is the binary sum of 11001 and 00101?
- viii. What will happen if in a C program you assign a value to an array element whose subscript exceeds the size of array?
a) The element will be set to 0;
b) The compiler would report an error ;
c) The program may crash if some important data gets overwritten;
d) The array size would appropriately grow.
- ix. Which of the following statement is true for `const int x=5;`
a) It would result to syntax error

- c) It would result to logical error
- d) Value of x can be 6 later in the program.

x. To print out a and b given below, which of the following printf() statement will you use?

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

```
float a=3.14;
```

```
double b=3.14;
```

```
a) printf("%f %lf", a, b); b) printf("%Lf %f", a, b); c) printf("%Lf %Lf", a, b);
```

```
d) printf("%f %Lf", a, b);
```

Q.2 Short answer type questions (4 questions @ 2.5 marks)

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- a. What is pointer in C?
- b. What is the utility of typedef in c?
- c. Define the role of linker in writing C programs.
- d. Give memory representation of string defined as
char ARRAY[]="C Programming";



Q.3A What is the importance of header files in C? Explain giving an example.

05

Q.3B Is the following statement correct?

05

```
int b=10;
```

```
int *a=&b;
```

Write two different ways to increment value of b by 2.

Q.4A Read marks of 3 subjects, identify whether a student is pass or fail. A student is passed if he/she has minimum 35 marks in all subjects.

05

Q.4B Write a program that uses event-controlled do-while loop to enter numbers and count the number of positive, zero, and negative numbers.

05

Q.5A Convert 7892 to binary, octal and hexa decimal. Write down steps for conversion.

05

Q.5B What do you understand by ASCII values? Write a program to display alphabets in lower case using their ASCII values.

05

Q.6A Consider the following declaration.

05

```
int a;
```

```
short int b;
```

```
unsigned int c;
```

What would be the maximum and minimum possible value which can be stored in a, b and c. Explain with calculations.

Q.6B Differentiate between unary operator and binary operator in C. Give one example of unary operator in C. 05

OR

Q.6B Explain the concept of Byte Padding in structure. How much bytes would be allocated to the variable c1 of type structure Contact1 and variable c2 of type Contact2. 05

```
struct Contact1
{
    char c_name[25];
    unsigned long int li_phoneno;
    char c_email[30];
} c1;
```

```
struct Contact2
{
    char c_name[25];
    unsigned long int li_phoneno;
    char c_email[30];
} c2;
```



Q.7A Categorize Errors raised during programming? Explain giving one program for each. 05

Q.7B Explain the difference between Call by Value and Call by reference considering an example of swapping two numbers. 05

OR

Q.7B A programmer declares Two dimensional array float a[4][4]. Draw memory representation of the declared array a. 05

Q.8A Below is a program written to concatenate two strings. Check the program. Correct it if any errors persist. Trace the corrected program using two strings "Jaipur" and "Jabalpur". 10

```
#include<stdio.h>
#include<conio.h>
void main( )
{
    char str1[25],str2[25];
    int i=0,j=0;
    printf("\nEnter First String:");
    gets(str1);
    printf("\nEnter Second String:");
    gets(str2);
    while(str1[i]!=0)
        i++;
```

```

while(str2[j]!='\0')
{
    str1[i]=str2[j];
}
str1[i]='\0';
printf("\nConcatenated String is );
puts(str1);
}

```



Q.9A Write the Output of the Following Program.

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i.

```

main()
{
    int i_first=15, i_second = 25;
    int i_result;
    i_first += i_second;
    i_result = i_first++ ;
    printf("i_first = %d",i_first);
    printf("\ni_second =
    %d",i_second);
    printf("\n i_result =
    %d",i_result);
    return;
}

```

ii.

```

#include<stdio.h>
int main()
{
    int i=1;
    for(;;)
    {
        printf("%d\n", i++);
        if(i>10)
            break;
    }
    return 0;
}

```

iii.

```

main( )
{
    int i = 65 ;
    char j = 'A' ;
    if ( i == j )
        printf ( "C is WOW" );
    else
        printf( "C is a headache" );
}

```

iv.

```

#include<stdio.h>
int main()
{
    int num1 = a;
    int num2 = b;
    printf("Value of %d ==%d is
    %d",num1,num2,num1==num2);
    return(0);
}

```

Q.9B Write a program to accept three strings from a user. Display them in descending order.

10

OR

Q.9B Write a program which accepts names from user , stores in a file named "names.txt". Write a function which counts vowels in a file names.txt.

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