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University Roll No.....

First Mid Term Examination, 2016-17

B.Tech. I Year I Semester

CSE 1101: Fundamentals of Computer & Programming

Time: 01 ½ Hours

Total Marks: 20

Note: Symbols have their usual meanings.

Section-A

Note: Attempt All Questions.

[1X5=5 marks]

- I. What are the differences between a compiler and an interpreter?
- II. What will be output of the following C program?

```
#include<stdio.h>
int main(){
    int max-val=100;
    int min-val=10;
    int avg-val;
    avg-val = max-val + min-val / 2;
    printf("%d",avg-val);
    return 0;
}
```

- III. #include<stdio.h>
void main()
{

```
    int a=5,b=6,c=11;
    printf("%d %d %d");
}
```

What will be the output when you compile and run the above code?

- IV. Mention the areas where mainframe and super computer are used.
- V. Write a program to read values of the variable and print the result of the computed expression: $C = (F - 32) / 100$

Section-B

Note: Attempt Any Three Questions.

[2x3 = 6 Marks]

- I. Write an algorithm to check whether a number given by the user is a Krishna Murthy number or not. Krishna Murthy number : It is a number which is equal to the sum of the factorials of all its digits.
- II. What is the purpose of a header file? Is the use of a header file absolutely necessary?
- III. Briefly explain (in steps) the compilation and execution of a program written in any high-level language.
- IV. What is wrong with each of the following?
 - i) `scanf("%d", i);`
 - ii) `#include stdio.h`
 - iii) `printf("\n Enter your name:",name);`
 - iv) `double int;`

Section-C

Note: Attempt Any Three Questions

[3X3=9 marks]

- I. Perform the following conversion:
 - i) $(A6C2)_{16} = ()_{10}$
 - ii) $(3164.12)_{10} = (?)_{16}$
 - iii) $(11010110101.1110101)_2 = ()_{10}$
 - iv) $(562.72)_8 = ()_{10}$
 - v) $(21)_{16} = (41)_A$ (Find the value of A)
 - vi) $(743.42)_8 = ()_2$
- II. Briefly describe the functions of the different components of a conventional digital computer with the help of a suitable block diagram.
- III. What is a cyclic property of data type in c? Explain with any example. For $n=128$, what is the output?

```
printf("%x %c %o %d",n,n,n,n);
```
- IV. Prepare a flowchart to read the marks of a student and classify them into different grades. If the marks secured are greater than or equal to 90, the student is awarded grade A; if marks greater than or equal to 80 but less than 90, grade B is awarded; if marks are greater than or equal to 65 but less than 80, grade C is awarded; otherwise grade D is awarded.

First-Term Examination
Odd-Semester, 2017-18

Program: B.Tech.

Branch: All

Year: I

Subject Name: Fundamentals of Computer & Programming

Code: CSE1101

Uni. Roll No:

Time: 1 Hr.

Total Marks: 15

Notes:

1. All parts of a question should be answered at one place.
 2. Answer should be brief and to-the-point and be supplemented with neat sketches.
 3. Any missing or wrong data may be assumed suitably giving proper justification.
 4. Figures on the right-hand side margin indicate full marks.
-

Section-A

Note: Attempt All Questions

3 x 2 = 6 Marks

- I. I want to upgrade the memory of my computer. The computer has three memory card slots. The first memory slot has two 64 MB of RAM. The second and third memory slots are empty. I have two options:

- Buy one 512MB memory card for ₹150.00
- Buy two 256MB memory cards for ₹ 60.00 each.

Which option will leave me better off for future memory upgrades? Justified your answer.

- II. A) If $(12A7C)_{16} = (X)_8$ then value of X ?
B) $(101111001111.011)_2 = (?)_8$
C) $(356.16)_{10} = (?)_2$
D) $(36.05)_8 = (?)_{10}$

- III. Write down the short notes on the following:
a) Linker b) Loader c) Compiler d) Assembler

Section-B

Note: Attempt All Questions

3 x 3 = 9 Marks

- I. Write an algorithm:
a) For calculating the factorial of a given number N.
b) To print the largest among three numbers.
- II. What is the purpose of a header file? Name and describe the primary data types in C.
- III. In a town, the percentage of men is 52. The percentage of total literacy is 48. If total percentage of literate men is 35 of the total population, write a program to find the total number of illiterate men and women if the population of the town is 80000.

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University Roll No:

First Term Examination, 2018-19

B.Tech./MCA, 1 Year, 1 Sem.

C Programming (BCSC0001/MCAC0002)

Time : 1 Hour

Maximum Marks: 15

Note: Attempt all questions.

Section-A

(0.5*10=5 Marks)

I) Fill in the blanks in the following program.

```
#include<stdio.h>
void main()
{
    ____j;
    ____k;
    ____("ENTER THE CHARACTER &
    FLOAT VALUE RESP.:");
    scanf("%c ____", &j, &k);
    printf("\n%c\n%f\n", j, k);
}
```

II) Fill in the blanks in the following program.

```
#include<stdio.h>
#include<____>
void main()
{
    int ____;
    float v;
    scanf("%d%d%d", &u, &a, &s);
    v=pow((u*u+2*a*s), 1/2.0);
    printf("The final velocity= %f", v); }
```

III) What is the output of following program?

```
#include <stdio.h>
int main()
{
    float c = 5.0;
    printf("Temperature in Fahrenheit is
    %.2f", (12/5)*c + 30);
```

```
return 0;
}
```

IV) What is the output of following program?

```
#include <stdio.h>
int main()
{
    int a = 15, b = 26, c = 35;
    if (c > b > a)
        printf("Hello");
    else
        printf("Bye");
    return 0;
}
```

V) Fill in the blanks in the following program.

```
#include<stdio.h>
void main()
{
    ____c;
    scanf("%c", &c);

    if((c>=65&&c<=90)____(c>=97&&c
    <=122))
        printf("IT IS ALPHABET");
    ____ (c>=48&&c<=57)
        printf("IT IS DIGIT");
    else
        printf("IT IS SPECIAL
        CHARACTER");
}
```

VI) Fill in the blanks in the following program.

```
#include <stdio.h>
int main()
{
    _____, _____, _____;
    printf("Enter first number: ");
    scanf("%i", &first);
    printf("Enter second number: ");
    scanf("%i", &second);
    _____ = first;
    _____ = second;
    _____ = third;
    printf("\nAfter swapping,
firstNumber = %i\n", first);
    printf("After swapping,
secondNumber = %i", second);
    return 0;
}
```

VII) What will be the output of following program? Assume integer is of 4 bytes.

```
#include <stdio.h>
void main()
{
    printf("%d %d",
sizeof(int), sizeof(char));
}
```

VIII) What will be the output?

```
#include <stdio.h>
void main()
```

```
{
    int x = 1, y = 0, z = 5;
    int a = x++ && ++y && z++;
    printf("%d %d %d", x, y, z);
}
```

IX) What will be the output?

```
#include <stdio.h>
void main()
{
    int x = 7;
    if (x > 4)
        printf("hello");
    else if (x == 7)
        printf("hi");
    else
        printf("no");
}
```

X) What will be the output?

```
#include <stdio.h>
int main()
{
    int a = 4;
    switch( a )
    {
        case 1: printf("First");
        case 2: printf("Second");
        case 2 + 2: printf("Third");
        case 4: printf("Final");
        break;
    }
    return 0; }
```

Section-B

(1*5=5 Marks)

I)

Fill in the blanks in the following program.

```
#include<stdio.h>
void main()
{
    int g1,g2,c1,c2;
    float spi;
    printf("Enter the grades in 2
    subjects:");
    ____ ("____",&g1,&g2);
    printf("Enter the credits in respective
    subjects:");
    ____ ("%d%d",____,____);
    spi=(____)(g1*c1+g2*c2)/(c1+c2);
    printf("The SPI = ____",spi);
}
```

II) Fill in the blanks in the following program.

```
#include<stdio.h>
void main()
{
    ____ a,b,c;
    ____ z;
    printf("Enter the sides of
    triangle:");
    scanf("%f %f %f",&a,&b,&c);

    z=(c+a>b)&&(b+a>c)&&(b+c>a)____1:2;
    if (z==1)
        printf("TRIANGLE IS VALID");

    ____ printf("TRIANGLE IS NOT
    VALID");
}
```

III) Fill in the blanks in the following program.

```
#include <stdio.h>
int main()
{
```

```
    int n1, n2, n3;
    printf("Enter three numbers: ");
    scanf("%d%d%d", &n1, &n2, &n3);
    if (n1>n2)
    {
        if(____)
            printf("%d is the largest number.",
            n1);
        else
            printf("%d is the largest number.",
            ____);
    }
    ____
    {
        if(n2>n3)
            printf("%d is the largest
            number.", ____);
        else
            printf("%d is the largest
            number.",n3);
    }
    return 0;}
```

IV) What does the following algorithm do?

Step 1: Start
 Step 2: Input a no N
 Step3: i=1
 Step 4: T=N*i
 Step 5: Print T
 Step 6: i=i+1
 Step 7: Repeat steps 4-6 till i<=10
 Step 8: Stop

V) Calculate the values of variables b, d, e for the following code segments? Assume n=14.

```
b=n<<2;
d=5^3;
e=9&11;
```

Section-C

(1*5=5 Marks)

I) What will be the values of following expressions? Assume $a=3$, $b=4$, $c=9$, $d=6$.
 $p = - ++d/2$;
 $m = ++a * b - c \% 4 + d$;

II) What does the following program do? Assume $a=15$, $b=6$

```
#include<stdio.h>
void main()
{
    int a,b,c,r;
    printf("Enter two numbers");
    scanf("%d%d",&a,&b);
    c=a/b;
    r=a-b*c;
    printf("%d",r);
}
```

III) What does the following program do?

```
#include<stdio.h>
void main()
{
    int n=5467,r,s=0;
    r=n%10;
    s=s*10+r;
    n=n/10;
    r=n%10;
    s=s*10+r;
    n=n/10;
    r=n%10;
    s=s*10+r;
    n=n/10;
    printf("%d",s);
}
```

IV) What will be the output of following program?

```
#include <stdio.h>
int main()
{
    int a = 5;
    switch (a) {
        default:
            printf("Sorry input again");
        case 1:
            printf("How");
        case 2:
            printf("Are");
        case 3:
            printf("You");
    }
}
```

V) What will be the output of the following program?

```
#include<stdio.h>
void main()
{
    int a=15;
    if(((a>>1)<<1)==a)
        printf("Hello");
    else
        printf("jobs");
}
```

First-Term Examination
B.Tech. I Year, II Sem.
C Programming (BCSC0001)

Time: 1 Hour

Maximum Marks: 15

Section-A

Note: Attempt all questions. All parts of the questions carry equal marks.

(2*3=6 Marks)

I. Explain the output of following programs?

```
(a) #include<stdio.h>
void main()
{
int a=36;
printf("%d\n%o\n%x",a,a,a);
}
```

```
(b) #include<stdio.h>
int main()
{
int a=16, b=2, c=3, result;
result = ( a < 2 ) || ( ( a * b ) < c );
printf("result = %d", result);
return 0;
}
```

II. Write a program to solve $a\%b$ (remainder when a is divided by b) without using $\%$ operator.

III. Why we include header files in our programs? Write any two escape sequence.

Section-B

Note: Attempt all questions. All parts of the questions carry equal marks.

(3*3=9 Marks)

I. Mr. X got 10 and half apples from each of Mayank, Raghav and Akash. He wants to know how many apples he has in total without adding them. Write a program which could help Mr. X in doing this.

- II. Write an algorithm and draw flowchart to print sum of numbers from 5 to 20.
- III. Apply the concept of operators and type conversion to solve the following outputs with justification-

(a) #include <stdio.h>
int main()

```
{  
    int a = 40, b = 20, c = 30;  
    if (c > b + a)  
        printf("TRUE");  
    else  
        printf("FALSE");  
    return 0;  
}
```

(b) #include <stdio.h>
int main()

```
{  
    int i = 55;  
    float j;  
    j = i / 3;  
    printf("%f\n", j);  
    return 0;  
}
```

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University Roll No.....

Mid-Term Examination, Odd Semester 2019-20

B.Tech. (CS), Year I, Semester I

BCSC0001: Computer Programming

Time: 2 Hours

Maximum Marks: 30

Section- A

Note: Attempt All Three Question.

3 x 2 =06 Marks

- I. What is the name of system program that combines the separately compiled modules of a program into a form suitable for execution? Distinguish between compiler and interpreter?
- II. Draw a flowchart to calculate the x to the power n using iterative algorithm.
- III. Write a program to find percentage of a student based on his/her marks entered in three subjects.

Section- B

Note: Attempt All Three Questions.

3 x 3 =09 Marks

- I. What will be the output of following programs?

(a)

```
#include <stdio.h>
void main()
{
    int a=5;
    switch(a)
    {
        printf("Message\n");
        default: printf("Default\n");
        case 2: printf("Case-2\n");
        case 3: printf("Case-3\n");
    }
}
```

(b)

```
#include<stdio.h>
void main()
{
    int x;
    x = 10 ^ 2+5;
    printf("%d",x);
}
```

(c)

```
#include <stdio.h>
int main()
{
    int m=1200;
    int x=printf("%d",m);
    printf("%d",x);
    return 0;
}
```

- II. Create a program that determines how many years you have left until retirement and the year you can retire. It should prompt for your current age and the age you want to retire and display the output as shown in the example that follows.

Example Output:

What is your current age? 25

At what age would you like to retire? 65

You have 40 years left until you can retire.

So you will retire in 2059.

- III. Write an algorithm and draw flowchart to check whether the entered number is positive, negative or equal to zero.

Section – C

Note: Attempt Any Three Questions.

3 x 5 = 15 Marks

- I. (a) Write a program to calculate the perimeter and area of a rectangle when the length and breadth of the rectangle are inputted through the keyboard.
(b) Write a program to find whether an entered number is even or odd.
- II. Write a program to print sum of first n natural number using while loop.
- III. If an integer needs two bytes of storage, then what would be the minimum value of a signed integer? What will be the output of following programs?

```
(a) #include <stdio.h>
void main() {
float a=8.0,d;
d=(13/5)*a+20;
printf("The output is %0.2f",d);
}
```

```
(b) #include <stdio.h>
void main()
{
int i;
for ( i = 2 ; i++ <= 6 ; printf ("%d", i) );
}
```

- IV. What is the difference between while and do while loop? Write a program to print the Fibonacci series upto n terms: 1, 1, 2, 3, 5, 8, 13.....

Mid-Term Examination, Odd Semester 2021-22

B.Tech 1st Year

COMPUTER PROGRAMMING (BCSG0002)

Time: 2 Hours

Maximum Marks: 30

Section- ANote: Attempt All Three Questions.

3 x 2 = 6 Marks

1. What is the output of the following programs

```
#include <stdio.h>
int main()
{
    int a=60,b=10,k;
    k=(a!=10) && (b=50);
    printf("%d",k);
    return 0;
}
```

2. What is the output of the following programs

```
#include <stdio.h>
int main()
{
    int x=1;
    if(!x)
        printf("x= %d",!x);
    else
        printf("x= %d",x);
    return 0;
}
```

3. Write a program to swap two numbers without using Additional operators or 3rd variable.

Section- B

Note: Attempt All Three Questions.

3 x 3 = 9 Marks

1. What is the output of the following programs

```
#include <stdio.h>
int main()
{
    int i = 0;
    do
    {
        printf("HELLO");
    } while (i++);
    return 0;
}
```

2. What is the output of the following programs

```
#include <stdio.h>
int main()
{
    int i = 0;
    switch (i)
    {
        case '0': printf("GLA");
        break;
        case '1': printf("University");
        break;
        default: printf("Mathura");
    }
    return 0;
}
```

3. Write a program to check number is even or odd using switch case (without if).

Section - C

Note: Attempt Any Three Questions.

3 x 5 = 15 Marks

1. Write a program to multiply a number by 31 without using multiplication operator.
2. Write a program to check whether a number is strong number or not.
3. Write a program to print Fibonacci series up to n numbers.
4. Write a program to print the below pattern

```
1
0 1
1 0 1
0 1 0 1
1 0 1 0 1
```

Course Name:

Course Outcome

CO1: Understand the basic concepts of problem-solving skills.

CO2: Apply the basic principles of programming in the C language.

CO3: Work with user input to create fun and interactive programs. Use in-built functions and library defined in C Language.

CO4: Apply the concepts of functions to solve real-world problems.

CO5: Acquire programming skills in core Computer Programming: flow control structure in C Language.

Build basic programs using fundamental programming constructs like variables, conditional logic, looping, and functions (built-in)

CO6: Develop algorithmic solutions to simple computational problems.

Printed Pages: 02

University Roll No.

Mid Term Examination, Odd Semester 2022-23

B.Tech (CS/EC(CS)), 1st Year, 1st Semester

BCSG 0002 Computer Programming

Time: 2 Hours

Maximum Marks: 30

Instruction for students:

1. Read question paper carefully.
2. Don't over write.
3. Write the complete code in one place neatly.
4. Maintain appropriate curly braces and syntax while writing program if needed.
5. Commenting code is optional

Section – A

Attempt All Questions

3 X 5 = 15 Marks

No.	Detail of Question	Marks	CO	BL	KL
1	Is there any difference between while and do while? If yes, then explain with suitable example.	3	CO5	R	D
2	Write a program input any number and check if number is Positive then print "Girls are best". If number is Negative print "Boys are best". If number is Zero Print "Both are best". Example: Input Enter number is 5 Output Girls are best	3	CO4	C	PC
3	a)What is the output of the following program: <pre>#include <stdio.h> int main() { int i=0, j=1, k; k=(i<5) && (j>10); printf("k=%d",k); return 0; }</pre> b) Write any five reserved words.	1.5 + 1.5	CO4	An	PC
4	Write a C program to input week number (1-7) and print day of week name using switch case. Example Input Input week number (1-7): 2 Output Tuesday	3	CO6	E	DI

5	<p>a) What is the output of the following program</p> <pre>#include <stdio.h> int main() { int k=1; while(k) { printf("JAI GLA "); k++; } return 0; }</pre> <p>b) What is the use of Data type? Write any Two Data type using in C programming?</p>	1.5 + 1.5	PC4	An	PC
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Section – B

Attempt All Questions

5 X 3 = 15 Marks

No.	Detail of Question	Marks	CO	BL	KL
6	<p>Write a program to print the following pattern</p> <pre>1 12 123 1234 12345</pre>	5	CO6	P	DI
7	<p>a) Write a short note on break continue goto</p> <p>b) What is the output of the following program</p> <pre># include <stdio.h> int main() { int a=2,b=2; a!=b?printf("both are equal"):printf("both are not equal"); return 0; }</pre>	3 + 2	CO2	R	F
8	<p>Write a C program to input a number from user and check whether given number is Armstrong number or not. Example Input Input number is 371 Output 371 is Armstrong number</p> <p style="text-align: center;">OR</p> <p>Write a C program to print Fibonacci series up to n terms using loop. Example: Input Enter number is 10 Output Fibonacci series: 0, 1, 1, 2, 3, 5, 8, 13, 21, 34</p>	5	CO1	E	D

Course Name: Computer Programming (BCSG0002)

Course Outcome

- CO1: Understand the basic concepts of problem-solving skills.
- CO2: Apply the basic principles of programming in the C language.
- CO3: Work with user input to create fun and interactive programs. Use in-built functions and library defined in C Language.
- CO4: Apply the concepts of functions to solve real-world problems.
- CO5: Acquire programming skills in core Computer Programming: flow control structure in C Language. Build basic programs using fundamental programming constructs like variables, conditional logic, looping, and functions (built-in)
- CO6: Develop algorithmic solutions to simple computational problems.

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University Roll No.

Mid Term Examination, Even Semester 2022-23
B. TECH (AIML/DA/CCV/IOT/EN/EE/CSF), 1 Year, II Sem
BCSG0002: Computer Programming

Time: 2 Hours

Maximum Marks: 30

Instruction for students:

1. Read question paper carefully.
2. Don't over write.
3. Write the complete code in one place neatly.
4. Maintain appropriate curly braces and syntax while writing program if needed.
5. Commenting code is optional

Section – A

3 X 5 = 15 Marks

No.	Detail of Question	Marks	CO	BL	KL
1	a) Write a short note on keywords in C language. b) What will be the output of following? <pre>#include<stdio.h> void main() { int a=12, b=5; printf("%d ", a+b); }</pre>	2 + 1	CO5	P	C
2	a) Write the difference between a=10 and a+=10 in C language. b) Explain conditional operator with suitable example.	1 + 2	CO5	R	F
3	Write a C program to input two numbers from user and swap their values. Sample Input: 2 4 Output: 4 2	3	CO3	P	C
4	a) Define for loop with the help of program. b) Write the output of the following program below <pre>#include<stdio.h> int main() { int k=5; if(k=5) printf(" JAI GLA "); else printf("GLA"); return 0; }</pre>	1.5 + 1.5	CO2	R	F

5	a) Write a program to print the following pattern 1 22 333 4444	3	CO5	AN	C
---	---	---	-----	----	---

Section – B

5 X 3 = 15 Marks

No.	Detail of Question	Marks	CO	BL	KL
6	Write a C program to input month number and print total number of days in month using switch...case. Sample Input: 5 Output: 31 days	5	CO4	C	PC
7	Write a C program to print Fibonacci series up to n terms using loop. Example: 0, 1, 1, 2, 3, 5, 8, 13, 21, ... , (n-1th + n-2th)	5	CO5	C	C
8	a) Write a C program to check whether an alphabet is vowel or consonant. Sample Input: A Output: Vowel b) Write a C program to input a number from user and check whether the number is Armstrong number or not. If number is Armstrong print "Yes, Armstrong number" otherwise "Not Armstrong number". Sample Input: 1634 Sample Output: Yes, Armstrong number	2.5 + 2.5	CO5	AN	C

CO – Course Outcome, BL – Abbreviation for Bloom's Taxonomy Level (R-Remember, U-Understand, A-Apply, An-Analyze, E-Evaluate, C-Create), KL – Abbreviation for Knowledge Level (F-Factual, C-Conceptual, P-Procedural, M-Metacognitive). However, For Engg. Courses in addition to F, C, P & M include D-Fundamental Design Principles, S-Criteria and Specifications, PC-Practical Constraints, DI- Design Instrumentalities