## Tutorial Sheet – 6(Operators)

**Course:** B.Tech (CSE) **Year/Semester:** I/I **Session:** 2017-2018

**Subject Name & Code:** Fundamentals of Computer & Programming (CSE 1101)

**Max. Marks: Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** Define the terms associativity and precedence.

**Q2.** If a=50, b=10 and c=20, evaluate the following complex expression:

c+= (a>0 && a<=10) ? ++a: a/b;

**Q3.** Identify the wrong expression from the following expressions and find the values of the correct expressions, if i=4, j=2, k=6, a=2 and n=8.

i.) p= ++-k; ii.) a= - ++k/2; iii.) m=++i- -k;

iv.) a= 2b++; v.) - -n++

**Q4.** In the following expression write the hierarchy of computation and also mention the type of operator:

a\*x\*x+b\*c/d>=x&&z!=15.0

**What will be the output of following program? (Q 5-9)**

**Q5.** #include<stdio.h>

void main()

{

int a=2, b=10, k, c;

k=! ((a<2) && b>2));

printf(“%d\n”,k);

c= (b<a || b>a);

printf(“%d”,c);

}

**Q6.** #include<stdio.h>

void main()

{

int b,k=8;

b=(k++-k++-k--,k++);

printf(“%d”,b);

}

**Q7.** #include<stdio.h>

int main()

{

int a = 2,b = 5;

a = a^b;

b = b^a;

printf("%d %d",a,b);

return 0;

}

**Q8.**#include <stdio.h>

void main()

{

int x = 1, y = 0, z = 5;

int a = x && y || z++;

printf("%d", z);

}

**Q9.** #include <stdio.h>

void main()

{

int x = 1, y = 0, z = 5;

int a = x && y && z++;

printf("%d", z);

}

## Tutorial Sheet – 7(Type Conversions and Floating point Representation)

**Course:** B.Tech (CSE) **Year/Semester:** I/I **Session:** 2017-2018

**Subject Name & Code:** Fundamentals of Computer & Programming (CSE 1101)

**Max. Marks: Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** Represent (-312.5) in IEEE 32 bit format.

**Q2.** Find the decimal equivalent of following number represented in IEEE 32 bit format.

0 10000110 10100000000000000000000

**Q3.** Represent (120.57) in IEEE 64 bit format.

**Q4.** What will be the output of following program?

main() {

int i = 17;

char c = 'c';

int sum;

sum = i + c;

printf("Value of sum : %d\n", sum );

}

**Q5.** What will be the output of following program?

#include <stdio.h>

main() {

int a = 17, b = 5;

double c;

c = (double) a / b;

printf("Value of c : %f\n", c );

}

**Q6.** What will be the output of following program?

#include <stdio.h>

main() {

int a = 17, b = 5;

double c;

c = a / b;

printf("Value of c : %f\n", c );

}

**Q7.** Suppose a C program has floating constant 1.414, what's the best way to convert this as "float" data type?

**Q8.** Predict the output?

#include <stdio.h>

void main()

{

float c = 5.0;

printf ("Temperature in Fahrenheit is %.2f", (9/5)\*c + 32);

}

## Tutorial Sheet – 8(Decision Control Statement)

**Course:** B.Tech (CSE) **Year/Semester:** I/I **Session:** 2017-2018

**Subject Name & Code:** Fundamentals of Computer & Programming (CSE 1101)

**Max. Marks: Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** Write a C program to find largest of three numbers using nested if-else.

**Q2.** Write a C Program to find largest of two numbers using switch case.

**Q3.** Write a program to calculate age of a person based on his given date of birth.

**Q4.** The output of the code below is (When 1 is entered).

#include <stdio.h>

void main()

{

char ch;

printf("enter a value btw 1 to 3:");

scanf("%c", &ch);

switch ( ch )

{

case "1":

printf("1");

break;

case "2":

printf("2");

break;

}

}

**What will be the output of the following program? (Q5-10)**

**Q5.** #include <stdio.h>

void main()

{

int x = 5;

if (x >1)

printf("hello");

else if (x == 5)

printf("hi");

else

printf("no");

}

**Q6** #include <stdio.h>

void main()

{

int x = 5;

if (x < 1);

printf("Hello"); }

**Q7.** #include<stdio.h>

main()

{

int a = 2, b = 4, c = 8, x = 4;

if ( x == b) x = a; else x = b;

if( x != b) c = c + b; else c = c + a;

printf(“c = %d\n”,c);

}

**Q8**. #include<stdio.h>

int main()

{

int a = 5;

switch( a )

{

case 1:

printf("First");

case 2:

printf("Second");

case 3 + 2:

printf("Third");

case 5:

printf("Final");

break;

}

return 0;

}

**Q9.** #include<stdio.h>

main()

{

unsigned short int x = -10; int y = 10;

if ( y <= x)

printf( “He is good\n”);

if ( y == ( x = -10))

printf( “She is better\n”);

if (( int) x == y)

printf(“it is the best\n”);

}

**Q10.** What will be the output of following program?

#include <stdio.h>

int main()

{ int a = 4;

switch (a) {

default:

printf("DEFAULT");

case 1:

printf("ONE");

case 2:

printf("TWO");

case 3:

printf("THREE");

}

}

## Tutorial Sheet – 9(Looping)

**Course:** B.Tech (CSE) **Year/Semester:** I/I **Session:** 2017-2018

**Subject Name & Code:** Fundamentals of Computer & Programming (CSE 1101)

**Max. Marks: Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** void main() {

int i;

for ( i = 1 ; i++ <= 5 ; printf ("%d", i ) ) ;

}

**Q2.** How many times loop will execute?

#include <stdio.h>

int main()

{

int i = 1024;

for (; i; i >>= 1)

printf("GeeksQuiz");

return 0;

}

**Q3.** #include<stdio.h>

int main()

{

int n;

for (n = 9; n!=0; n--)

printf("n = %d", n--);

return 0;

}

**Q4.** void main()

{

Short int .a;

for ( a = 1 ; a <= 32767; a++)

printf ('%d", a ) ;

}

**Q5.** Write a program to find number is palindrome or not.

**Q6.** Write a program to print all odd numbers from m to n.

**Q7.** Write a program to generate multiplication table from 20 to 50.

## Tutorial Sheet – 10(Looping with Special Control Statement)

**Course:** B.Tech (CSE) **Year/Semester:** I/I **Session:** 2017-2018

**Subject Name & Code:** Fundamentals of Computer & Programming (CSE 1101)

**Max. Marks: Time allowed:** 45 Mins.

**Note/Instruction (If any)**

**Q1.** Consider a scenario where user enters numbers continuously and we are supposed to find the sum of all those numbers entered by the user and as the user enters a negative number we must stop him from entering numbers further and print the sum. Write a C program to accomplish the task mentioned above.

**Q2.** Write a C program to print all composite numbers from m to n.

**Q3.** Write a C program to print the following pattern of stars and alphabets having n rows:-

\*

\*A\*

\*A\*A\*

\*A\*A\*A\*

**Q4.** Write a program to print the sum of the following series

1! +3! +5! +7!+…………..upto n terms.

**Q5.** What is the output of this C code?

#include <stdio.h>

int main(){

int i = 0;

do{

i++;

if (i == 2)

continue;

printf("In while loop ");

} while (i < 2);

printf("%d\n", i);

}

**Q6.** David is playing a learning game called “PICK and SKIP” with 100 tokens where each token is uniquely labeled from 1 to 100.He is required to pick token 1, then token 3, then token 5 and so on and skip token 2, token 4, token 6 and so on. Write a C program(using break or continue) that prints all tokens that must be picked by David so that he can verify whether he has picked correct tokens or not.