**ODD 2020**

**Tutorial Sheets – 4 & 5**

**Software Development Fundamentals – I (15B11CI111)**

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| **Course Outcomes (CO)** | |
| **CO1** | Explain various phases of software development life cycle |
| **CO2** | Explain various data types, memory allocation schemes, precedence of arithmetical and logical operations, and need of array, and structures |
| **CO3** | Draw the flow chart and write the high level code for different problems |
| **CO4** | Apply and implement functions with or without pointers for different problems |
| **CO5** | Demonstrate and implement various operations like traverse, insertion, deletion, *etc.* on files |

**Note: Students are advised to submit their solutions to their respective tutorial faculties**

**Before attempting the following questions, discuss the doubts in earlier tutorials (Tutorial 1, Tutorial 2, and Tutorial 3), if any.**

**Q1. [CO2]** What will be the output of following program?

#include<stdio.h>

int main()

{

printf("%d\t",sizeof(2.5));

printf("%d\t",sizeof(2));

printf("%d\t%d",sizeof('A'),'A');

return 0;

}

**Q2. [CO2]**What will be the output of the following program?

#include<stdio.h>

int main(){

float me = 5.25;

double you = 5.25;

if(me == you)

printf("Hey");

else

printf("Bye");

return 0;

}

**Q3. [CO2]**Which program will run successfully? Also find errors, if any and discuss why.

(a)

int var;

int main(void)

{

var = 10;

return 0;

}

(b)

extern int var;

int main(void)

{

return 0;

}

(c)

extern int var;

int main(void)

{

var = 10;

return 0;

}

(d)

#include<stdio.h>

extern int var;

int main(void)

{

int var = 10;

printf("%d",var);

return 0;

}

(e)

extern int var = 0;

int main(void)

{

var = 10;

return 0;

}

**Q4. [CO2]** Show the output of the following code:

#include <stdio.h>

main() {

char ch = 'B';

printf("%c\n", ch);

int x = 45, y = 90;

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

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

float f = 12.67;

printf("%f\n", f);

printf("%e\n", f);

int a = 67;

printf("%o\n", a);

printf("%x\n", a);

char str[] = "Hello World";

printf("%s\n", str);

printf("%20s\n", str);

printf("%-20s\n", str);

printf("%20.5s\n", str);

printf("%-20.5s\n", str);

}

**Q5. [CO2]**Which one of the following operator performs operations with only integer operands?

1. +
2. \*
3. /
4. %

**Q6. [CO2]** Which one of the following statements are true in context of || (logical OR) operator

S1: Evaluation of the expression involving || operators only will stop if one of its components is evaluated as true

S2: Evaluation of the expression involving || operators only will stop if one of its components is evaluated as false

S3: Evaluation of the expression involving || operators only takes place from right to left

S4: Evaluation of the expression involving || operators only takes place from left to right

1. S1 & S2
2. S1 & S3
3. S1 & S4
4. None of the listed options

**Q7. [CO2]** Which one of the following is the output of the program given below?

#include<stdio.h>

void main()

{

int A = - -2

printf(“%d”, A);

}

1. -2
2. 2
3. Will give error
4. None of the listed options

**Q8. [CO2]** Which one of the following is the output of the program given below?

#include <stdio.h>

int main()

{

int x, y, z;

x = 20;

y = 30;

z = 10;

if(x > y, x > z)

printf("IF BLOCK");

else

printf("ELSE BLOCK");

return 0;

}

1. IF BLOCK
2. ELSE BLOCK
3. Will give error
4. None of the listed options

**Q9. [CO2]** Which one of the following is the output of the program given below?

#include <stdio.h>

int main()

{

int w, x, y, z;

x = 20;

y = 30;

z = 10;

w = (x = z, y+=x, z = x+y+z);

printf(“%d %d %d %d”, w, x, y, z);

}

1. 60, 10, 40, 60
2. 10, 10, 40, 60
3. 10, 10, 30, 60
4. None of the listed options

**Q10. [CO2]**Which one of the following is not a valid declaration of a variable in C?

D1: signed int x;

D2: unsigned short y;

D3: unsigned short int z;

D4: signed short w;

1. D2
2. Both D2 and D4
3. All declarations are valid
4. None of the listed options

**Q11. [CO2]** What will be output of the following program?

int main()

{

float w, x;

double y, z;

w = 20 / 3;

x = 20.0 / 3;

y = 20 / 3;

z = 20.0 / 3;

if(w == y)

printf(“Same”);

else

printf(“Different”);

if(x == z)

printf(“\t Same”);

else

printf(“\t Different”);

if(w == x)

printf(“\t Same”);

else

printf(“\t Different”);

return 0;

}

1. Same Same Same
2. Same Different Different
3. Different Same Same
4. Different Different Different