**ST. JOSEPH’S UNIVERSITY, BENGALURU -27**

Registration Number:

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**B.Sc. OPEN ELECTIVE – I SEMESTER**

**SEMESTER EXAMINATION: OCTOBER 2022**

**(Examination conducted in December 2022)**

**CSOE1 – C Programming Concepts**

**Time: 2 Hours Max Marks: 50**

**This paper contains ELEVEN printed pages and ONE part**

**PART-A**

**Answer all the questions: (50x1=50)**

1. C Language is a successor to which language?
   1. FORTRAN
   2. D Language
   3. BASIC
   4. B Language
2. High level language is a \_\_\_\_\_\_\_\_\_?
   1. Human readable like language.
   2. language with big program size.
   3. language with small program size.
   4. language which is difficult to understand and not human readable.
3. C is \_\_\_\_\_\_\_ type of programming language?
   1. Object Oriented
   2. Procedural
   3. Bit level language
   4. Functional
4. For 16-bit compiler allowable range for integer constants is \_\_\_\_\_\_\_\_?
   1. -32768 to 32767
   2. 3.4e38 to 3.4e38
   3. -32767 to 32768
   4. -32668 to 32667
5. C programs are converted into machine language with the help of \_\_\_\_\_\_\_
   1. A compiler
   2. An assembler
   3. An operating system
   4. None of these.
6. Which one of the following is not a reserved keyword for C?
   1. auto
   2. case
   3. main
   4. default
7. A C variable cannot start with
   1. A number
   2. A special symbol other than underscore
   3. Both a & b
   4. An alphabet
8. Which one of the following is not a valid identifier?
   1. \_abcd
   2. 1abcd
   3. ab\_cd
   4. abcd1
9. What number would be shown on the screen after the following statements of C are executed?

int main() {

char ch;

int i;

ch = 'G’;

i = ch - 'A’;

printf("%d", i); }

* 1. 6
  2. 5
  3. 1
  4. None of these

1. The first expression in a for loop is
   1. Step value of loop
   2. Value of the counter variable
   3. Any of above
   4. None of above
2. Due to variable scope in c
   1. Variables created in a function cannot be used another function
   2. Variables created in a function can be used in another function
   3. Variables created in a function can only be used in the main function
   4. None of above
3. What is the Output of following program:

int main() {

float x = 10.7;

int i;

i = (int) x;

print i; }

* 1. null
  2. error
  3. 10
  4. garbage value

1. Which of the following is an invalid variable name in C language?
   1. int \_number;
   2. float rate;
   3. int variable12;
   4. int $main;
2. ‘\n’ is a variation of writing “\n” in C program.
   1. True
   2. False
3. The unformatted IO function that reads a single character from keyboard, does not use any buffer to store it and thus the entered character is immediately returned without waiting for the enter key is \_\_\_\_\_\_
   1. getch()
   2. getche()
   3. getchar()
   4. gets()
4. Which of the following is the correct order of evaluation for the below expression?

**z = x + y \* z / 4 % 2 – 1**

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

1. Consider the given programming snippet.

#include <stdio.h>

int main()

{

int num = 2;

switch (num + 2)

{

case 1: printf("Case 1: ");

case 2: printf("Case 2: ");

case 3: printf("Case 3: ");

default: printf("Default: ");

}

return 0;

}

The output of the above-mentioned code is \_\_\_\_\_\_\_\_\_\_

1. Case 1
2. Case 2
3. Case 3
4. Case 4
5. Default
6. Error message
7. Which command is used to skip the rest of a loop and carry on from the top of the loop again?
   1. break
   2. continue
   3. exit
   4. jump
8. In for loop in C program, if the condition is missing.,
   1. it is assumed to be present and taken to be false
   2. it is assumed to be present and taken to the true
   3. it result in a syntax error
   4. execution will be terminated abruptly
9. If the variable c is initialized to 1 in the following program snippet, then how many times will the following loop be executed.

while((c>0)&&(c<60))

{

Loop body

C++;

}

* 1. 60
  2. 59
  3. 61
  4. None of these

1. Output of the following code is

void main()

{

int i=10;

i = !i>14;

printf("i=%d", i);

}

* 1. 10
  2. 14
  3. 0
  4. 1
  5. None

1. What is the maximum number of dimensions an array in C may have?
   1. Two
   2. Eight
   3. Twenty
   4. Theoretically no limit. The only practical limits are memory size and compilers
2. Choose the statement that holds good for the following syntax.

char ary[]="Hello..!";

* 1. Character array, ary is a string.
  2. ary has no Null character at the end
  3. String size is not mentioned
  4. String can not contain special characters

1. Strings are terminated with \_\_\_\_\_\_\_\_ in C language.
   1. ‘\O’
   2. ‘\\O’
   3. “\O”
   4. Blank Space
2. When the condition of if statement is false, the flow of code will \_\_\_.
   1. go into the if block
   2. Exit the program
   3. Continue the code after skipping the if block
   4. None of these
3. Increment (++) and decrement (--) are the \_\_\_ operators in C?
   1. Unary
   2. Binary
   3. Ternary
   4. None of the above
4. What will be the output of the following C code?

#include <stdio.h>

int main(){

int a = 11;

while (a < 20) {

printf("%d ", a);

a += 2;

}

return 0; }

* 1. 11 13 15 17 19
  2. 11 12 13 14 15 16 17 18 19 20
  3. 11 13 15 17 19 21
  4. None of these

1. The value of an automatic variable that is declared but not initialized is \_\_\_\_\_\_
   1. 0
   2. 1
   3. NULL
   4. Garbage value
2. What is the output of C Program.?

int main()

{

int a[];

a[4] = {1,2,3,4};

printf("%d", a[0]);

}

* 1. 1
  2. 2
  3. 4
  4. Compiler error

1. Determine the output for the following.

void main()

{ int i = abc(10);

printf("%d", --i); }

int abc(int i)

{

return(i++);

}

* 1. 10
  2. 9
  3. 11
  4. none of these

1. The arguments passed in the function call are called as
   1. Actual Arguments
   2. Formal Arguments
   3. Informal Arguments
   4. Return statements
2. What are strings in C programming?
   1. Individual variables
   2. Group of function
   3. Group of character type variables in array form
   4. All of the above
3. What will be the output of the following C code?

#include<stdio.h>

int main()

{

int p = 1, q = 2, r = 3, s = 4, x;

e = r + s = q \* p;

printf(“%d, %d\n”, x, s);

}

* 1. Syntax error
  2. 5, 2
  3. 7, 2
  4. 7, 4

1. What will be the output of the following code snippet?

#include <stdio.h>

int main() {

int a = 3, b = 5;

int t = a;

a = b;

b = t;

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

return 0;

}

* 1. 3 5
  2. 3 3
  3. 5 5
  4. 5 3

1. What is the output of the following code snippet?

#include <stdio.h>

int main() {

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

int sum = 0;

for(int i = 0; i < 4; i++) {

sum += a[i];

}

printf("%d", sum);

return 0;

}

* 1. 1
  2. 2
  3. 20
  4. 10

1. What is the output of the following code snippet?

int main() {

int sum = 2 + 4 / 2 + 6 \* 2;

printf("%d", sum);

return 0;

}

* 1. 2
  2. 15
  3. 16
  4. 18

1. What will be the output of the following code?

#include <stdio.h>

void solve() {

int a[] = {1, 2, 3, 4, 5};

int sum = 0;

for(int i = 0; i < 5; i++) {

if(i % 2 == 0) {

sum += \*(a + i);

}

else {

sum -= \*(a + i);

}

}

printf("%d", sum);

}

int main() {

solve();

return 0;

}

* 1. 2
  2. 15
  3. 3
  4. Syntax error

1. Which of the following is an exit-controlled loop?
   1. while loop
   2. for loop
   3. do-while loop
   4. None of the above
2. What is the size of the int data type (in bytes) in C?
   1. 4
   2. 8
   3. 2
   4. 1
3. What will be the output of the following code snippet?

#include <stdio.h>

#define VAL 3 \* (2 + 6)

void solve() {

int a = 10 + VAL;

printf("%d", a);

}

int main() {

solve();

return 0;

}

* 1. 104
  2. 24
  3. 34
  4. 10

1. What will be the output of the following code snippet?

#include <stdio.h>

void solve() {

int x = 1, y = 2;

printf(x > y ? "Greater" : x == y ? "Equal" : "Lesser");

}

int main() {

solve();

return 0;

}

* 1. Greater
  2. Lesser
  3. Equal
  4. None of the above

1. What will be the output of the following?

#include <stdio.h>

void solve() {

printf("%d ", 9 / 2);

printf("%f", 9.0 / 2);

}

int main() {

solve();

return 0;

}

* 1. 4 4.5000
  2. 4 4.0000
  3. 4.5000 4.5000
  4. 4 4

1. What will be the output of the following code snippet?

#include <stdio.h>

#include<string.h>

void solve() {

char s[] = "Hello";

printf("%s ", s);

char t[40];

strcpy(t, s);

printf("%s", t);

}

int main() {

solve();

return 0;

}

* 1. Hello Hello
  2. Hello
  3. Compilation Error
  4. None of the above

1. Which format specifier is used to read and print the string using printf() and scanf() in C?
   1. %c
   2. %str
   3. %p
   4. %s
2. Which function is used to concatenate two strings in C?
   1. concat()
   2. cat()
   3. stringcat()
   4. strcat()
3. Multiple values of the same variable can be tested using \_\_\_\_\_\_\_\_\_.
   1. switch
   2. for
   3. Function
   4. All of these
4. Is it possible to nest if-else statements in C programming?
   1. Yes
   2. No
5. What will be the output of the following C code?

#include <stdio.h>

int main()

{

int marks = 43;

if (marks > 90)

printf("Grade : A ");

else if (marks > 75)

printf("Grade : B ");

else if (marks > 60)

printf("Grade : C ");

if (marks > 40)

printf("Grade : D ");

else

printf("Fail ");

return 0;

}

* 1. Grade : A
  2. Grade : B
  3. Grade : C
  4. Grade : D

1. What will be the result of (! (25 > 25))
   1. True
   2. False
   3. Error
   4. None of these
2. Decision making in the C programming language is \_\_\_\_\_\_\_\_.
   1. Repeating the same statement multiple times
   2. Executing a set of statements based on some condition
   3. Providing a name of the block of code
   4. All of these