

**BRAINWARE UNIVERSITY****Term End Examination 2020 - 21****Programme – Bachelor of Science (Honours) in Computer Science****Course Name – Programming Fundamentals using C****Course Code - BCSC101****Semester / Year - Semester I**

Time allotted : 75 Minutes

Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

1. (Answer any Sixty)

(i) ASCII value of Y is

- | | |
|-------|--------|
| a) 89 | b) 122 |
| c) 90 | d) 121 |

(ii) ASCII value of B is

- | | |
|-------|-------|
| a) 68 | b) 67 |
| c) 66 | d) 98 |

(iii) How many keywords are there in C language?

- | | |
|-------|-------|
| a) 16 | b) 24 |
| c) 32 | d) 40 |

(iv) `printf("%d", 25%4);`

- | | |
|------|------|
| a) 1 | b) 2 |
| c) 3 | d) 4 |

(v) Which of the following is not a relational operator?

- | | |
|------|-------|
| a) < | b) << |
| c) > | d) <= |

(vi) How will you print `\n` on the screen?

- a) `printf("\n");`
- b) `echo "\\n";`
- c) `printf('\n');`
- d) `printf("\\n");`

(vii) Which of the declaration is correct?

- a) `int length;`
- b) `char int;`
- c) `int long;`
- d) `float double;`

(viii) Which of the following is the correct order of evaluation for the below expression?
 $z = x + y * z / 4 \% 2 - 1$

- a) `* / % + - =`
- b) `= * / % + -`
- c) `/ * % - + =`
- d) `* % / - + =`

(ix) Which of the following is the correct usage of conditional operators used in C?

- a) `a>b ? c=30 : c=40;`
- b) `a>b ? c=30;`
- c) `max = a>b ? a>c?a:c:b>c?b:c`
- d) `return (a>b)?(a:b)`

(x) Which of the following is not a logical operator?

- a) `&`
- b) `&&`
- c) `||`
- d) `!`

(xi) `puts()` is a standard library function under which header file ?

- a) `Stdio.h`
- b) `Conio.h`
- c) `String.h`
- d) `Stdlib.h`

(xii) `gets()` is a standard library function under which header file ?

- a) `Stdio.h`
- b) `Conio.h`
- c) `String.h`
- d) `Stdlib.h`

(xiii) Global variables are _____

- a) Internal
- b) External
- c) Both Internal and External
- d) None of these

(xiv) What is the scope of an external variable?

- a) Whole source file in which it is defined
- b) From the point of declaration to the end of the file in which it is defined
- c) Any source file in a program
- d) From the point of declaration to the end of the file being compiled

(xv) Is initialisation mandatory for local static variables?

- a) Yes
- b) No
- c) Depends on the compiler
- d) Depends on the standard

(xvi) Compiler will convert

- a) High level code to object code
- b) Object code to .exe file
- c) Object code to low level code
- d) Low level to high level code.

(xvii) Which of the following is a exit controlled loop

- a) Do while
- b) While
- c) For
- d) Goto

(xviii) Which of the following is an invalid if-else statement?

- a) if (if (a == 1)){ }
- b) if (func1 (a)){ }
- c) if (a){ }
- d) if ((char) a){ }

(xix) Which for loop has range of similar indexes of 'i' used in for (i = 0; i < n; i++)?

- a) for (i = n; i > 0; i-)
- b) for (i = n; i >= 0; i-)
- c) for (i = n-1; i > 0; i-)
- d) for (i = n-1; i > -1; i-)

(xx) Which of the following cannot be used as LHS of the expression in for

(exp1;exp2; exp3)?

- a) variable
- b) function
- c) typedef
- d) macros

(xxi) The keyword 'break' cannot be simply used within _____

- a) do-while
- b) if-else
- c) for
- d) while

(xxii) Which keyword is used to come out of a loop only for that iteration?

- a) break
- b) continue
- c) return
- d) None of these

(xxiii) The keyword used to transfer control from a function back to the calling function is

- a) switch
- b) goto
- c) go back
- d) return

(xxiv) In C, if you pass an array as an argument to a function, what actually gets passed?

- a) Value of elements in array
- b) First element of the array
- c) Base address of the array
- d) Address of the last element of array

(xxv) clrscr() is a standard library function under which header file ?

- a) stdio.h
- b) conio.h
- c) math.h
- d) stdlib.h

(xxvi) getch() is a standard library function under which header file ?

- a) stdio.h
- b) conio.h
- c) math.h
- d) stdlib.h

(xxvii) exit() is a standard library function under which header file ?

- a) stdio.h
- b) conio.h
- c) math.h
- d) stdlib.h

(xxviii) strcmp() is a standard library function under which header file ?

- a) stdio.h
- b) conio.h
- c) string.h
- d) stdlib.h

(xxix) strcpy() is a standard library function under which header file ?

- a) stdio.h
- b) conio.h
- c) string.h
- d) stdlib.h

(xxx) A function which calls itself is called a ___ function.

- a) Self Function
- b) Auto Function
- c) Recursive Function
- d) Static Function

(xxxi) How many values can a C Function return at a time.?

- a) Only One Value
- b) Maximum of two values
- c) Maximum of three values
- d) Maximum of 8 values

(xxxii) What are types of Functions in C Language.?

- a) Library Functions
- b) User Defined Functions
- c) Both Library and User Defined
- d) None of these

(xxxiii) Choose correct statements about C Language Pass By Value.

- a) Pass By Value copies the variable value in one more memory location
- b) Pass By Value does not use Pointers.
- c) Pass By Value protects your source or original variables from changes in outside functions or called functions
- d) All of these

(xxxiv) Assuming int is of 4bytes, what is the size of int arr[15];?

- a) 15
- b) 19
- c) 11
- d) 60

(xxxv) In general, the index of the first element in an array is _____

- a) 0
- b) -1
- c) 2
- d) 1

(xxxvi) Elements in an array are accessed _____

- a) randomly
- b) sequentially
- c) exponentially
- d) logarithmically

(xxxvii) What are the Types of Arrays

- a) int, long, float, double
- b) struct, enum
- c) char
- d) All of these

(xxxviii) The value obtained in the function is given back to main by using _____ keyword.

- a) Return
- b) return
- c) new
- d) volatile

(xxxix) Functions in C are always _____

- a) Internal
- b) External
- c) Both Internal and External
- d) External and Internal are not valid terms for functions

(xl) Array sizes are optional during array declaration by using _____ keyword.

- a) Auto
- b) Static
- c) Extern
- d) register

(xli) What is the similarity between a structure, union and enumeration?

- a) All of them let you define new values
- b) All of them let you define new data types

- c) All of them let you define new pointers d) All of them let you define new structures

(xlii) What is a structure in C language?

- a) A structure is a collection of elements that can be of same data type. b) A structure is a collection of elements that can be of different data type.
c) Elements of a structure are called members. d) All of these

(xliii) Which of the following are themselves a collection of different data types?

- a) string b) structures
c) char d) All of these

(xliv) User-defined data type can be derived by_____

- a) struct b) enum
c) typedef d) None of these

(xlv) Which of the following structure declaration will throw an error?

- a) struct temp{ }s; main(){ } b) struct temp{ }; struct temp s; main(){ }
c) struct temp s; struct temp{ }; main(){ } d) None of these

(xlvi)

Size of a union is determined by size of the

- a) b)
First member in the union Last member in the union
c) d)
Biggest member in the union Sum of the sizes of all members

(xlvii)

What would be the size of the following union declaration?

```
union uTemp
{
double a;
int b[10];
char c;
}u;
```

(Assuming size of double = 8, size of int = 4, size of char = 1)

- | | |
|-------|-------|
| a) 4 | b) 8 |
| c) 40 | d) 80 |

(xlviii)

Which of the following comments about union are true?

- | | |
|---|--|
| a) | b) |
| Union is a structure whose members share the same storage area | Size allocated for union is the size of its member needing the maximum storage |
| c) | d) |
| Only one of the members of union can be assigned a value at a particular time | All of these |

(xlix)

Which is the correct syntax to declare constant pointer?

- | | |
|----------------------|---|
| a) | b) |
| int *const constPtr; | *int constant constPtr; |
| c) | d) |
| const int *constPtr; | int *const constPtr and const int *constPtr |

(l)

In the following code, the p2 is Integer Pointer or Integer?


```
typedef int *ptr;
ptr p1, p2;
```

a)

Integer

c)

Error in declaration

b)

Integer pointer

d)

None of these

(li)

What is the output of this C code?

```
int main()
{
int i = 10;
void *p = &i;
printf("%d\n", (int)*p);
return 0;
}
```

a)

Compile time error

c) 10

b)

Segmentation fault/runtime crash

d)

Undefined behaviour

(lii)

Which reference modifier is used to define reference variable?

a)

&

c)

b)

\$

d)

#

None of these

(lii)

Which of the following does not initialize ptr to null (assuming variable declaration of a as int a=0;)?

a)

`int *ptr = &a;`

c)

`int *ptr = a - a;`

b)

`int *ptr = &a - &a;`

d)

All of these

(liv)

..... is used to detect the end of file.

a)

error

c)

Puts

b)

eof

d)

Getch

(lv)

In context to file handling, Which of the following are file handling operations ?

a)

opening

c)

read/write

b)

closing

d)

all of above

(Ivi)

By default, all the files are opened in which of the following mode?

a)

Binary Mode

b)

Text Mode

c)

Sequential Mode

d)

Binary mode and text mode

(Ivii)

#include is known as

a)

Post-processor directives

b)

Pre-processor directives

c)

Header file

d)

File header

(Iviii)

Which of the following errors would be reported by the compiler on compiling the program given below?

```
#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;

}
```

a)

b)

There is no break statement in each case.

c)

Duplicate case case 5:

Expression as in case 3 + 2 is not allowed.

d)

No error will be reported.

(lix)

Point out the error, if any in the program.

```
#include<stdio.h>
int main()
{
    int i = 1;
    switch(i)
    {
        case 1:
            printf("Case1");
            break;
        case 1*2+4:
            printf("Case2");
            break;
    }
    return 0;
}
```

a)

Error: in case 1*2+4 statement

c)

Error: in switch statement

b)

Error: No default specified

d)

No Error

(lx)

What is the output of this C code?

```
int main()
```

```
{
void foo(), f();
f();
}
void foo()
{
printf("2 ");
}
void f()
{
printf("1 ");
foo();
}
```

a)

Compile time error as foo is local to main

c)

2 1

b)

1 2

d)

Compile time error due to declaration of functions inside main