BRAINWARE UNIVERSITY

Term End Examination 2022
Programme – MCA-2018/MCA-2019/MCA-2020/MCA-2021
Course Name – C Programming/Principles of Programming using C
Course Code - MCSE010605/MCA103/MCA102
(Semester I)

Full Marks : 60   **Time : 2:30 Hours**

[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 15=15

1.   *Choose the correct alternative from the following :*

(i)   Identify the person who developed the C programming language?

   a) Bjarne Stroustrup(N)   b) James Gosling(N)
   c) Dennis Ritchie(Y)   d) Ray Boyce(N)

(ii)   A name having a few letters, numbers and special character '_' is called

   a) keywords(N)   b) reserved keywords(N)
   c) tokens(N)   d) identifiers(Y)

(iii)   State the number of main() functions we can have in a C project?

   a) 1   b) 2
   c) 3   d) 5

(iv)   What will be the output: int main() { int a = 5; int b = 10; int c = a+b; printf("%i",c); }

   a) 0(N)   b) 15(Y)
   c) Eror(N)   d) Undefined i(N)

(v)   What will be the output of the following C code? #include int main() { printf("Hello World! %d \n", x); return 0; }

   a) Hello World! x;(N)   b) Hello World! followed by a junk value(N)
   c) Compile time error(Y)   d) Hello World!(N)

(vi)   What will be the output of the following C code? #include int main() { printf("Hello World! %d \n", x); return 0; }

   a) It will cause a compile-time error(N)   b) It will cause a run-time error(N)
   c) It will run without any error and prints 3(Y)   d) It will experience infinite looping(N)

(vii)   How are String represented in memory in C?

   a) An array of characters   b) The object of some class
   c) Same as other primitive datatypes   d) LinkedList of characters

(viii) State the output of the following code snippet? #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; }

a) 2
b) 15
c) Syntax Error
d) 3

(ix) State the output of the following code snippet? #include <stdio.h> void solve() { int first = 10, second = 20; int third = first + second; { int third = second - first; printf("%d ", third); } printf("%d", third); } int main() { solve(); return 0; }

a) 44864
b) 30 10
c) 20 10
d) 44854

(x) Which of the following is not possible statically in C language?

a) Jagged Array
b) Rectangular Array
c) Cuboidal Array
d) Multidimensional Array

(xi) The standard header _____ is used for variable list arguments in C.

a) <stdio.h >
b) <stdlib.h>
c) <math.h>
d) <stdarg.h>

(xii) State the output of the following C code? #include <stdio.h> int const print() { printf("brainwareuniversity.com"); return 0; } void main() { print(); }

a) Error because function name cannot be preceded by const
b) brainwareuniversity.com
c) brainwareuniversity.com is printed infinite times
d) Blank screen, no output

(xiii) Examine if the following C code compile without any error? #include <stdio.h> int main() { for (int k = 0; k < 10; k++); return 0; }

a) Yes
b) No
c) Depends on the C standard implemented by compilers
d) Error

(xiv) State the output of the following C code snippet? #include <stdio.h> void main() { 1 < 2 ? return 1: return 2; }

a) returns 1
b) returns 2
c) Varies
d) Compile time error

(xv) State the value of the following assignment expression? (x = foo())!= 1 considering foo() returns 2

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

Group-B
(Short Answer Type Questions)　　　　　　　　　　　　　　　　　　3 x 5=15

2. Discuss about logical operators available in C.　　　　　　　　　　　　(3)

3. Write the difference between Identifier and variable.　　　　　　　　　(3)

4. Write a program in C to accept a no. and reverse the no.　　　　　　　(3)
5. Write short note on storage class in C.　　　　　　　　　　　　　　　(3)
6. Write a program to illustrate the Fibonacci series up to n terms.　　　　(3)
OR
　Write a function to evaluate whether a number is palindrome or not.　　(3)

Group-C
(Long Answer Type Questions)　　　　　　　　　　　　　　　　　　5 x 6=30

7. Define recursive function with example.   (5)
8. Explain the process of determining the length of a string value that was stored in a variable?   (5)
9. Explain the concept of Dynamic Memory Allocation (DMA)?   (5)
10. Distinguish between Entry controlled and Exit controlled loop?   (5)
11. Explain What is the difference between the expression ++i and i++? Give example.   (5)

12. Identify if the statement is correct or not. Emphasize with example with proper output.   (5)
    myName =newStr(str1);

                                      OR
    Describe the order of precedence with regards to operators in C.   (5)

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