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Reg. No. :

Code No. : 20409 E Sub. Code : CMCS 11/
CMSE 11

B.Sc. (CBCS) DEGREE EXAMINATION,
NOVEMBER 2022.

First Semester

Computer Science / Software Engineering – Core

PROGRAMMING IN C

(For those who joined in July 2021 onwards)

Time : Three hours

Maximum : 75 marks

PART A — (10 × 1 = 10 marks)

Answer ALL questions.

Choose the correct answer :

1. All keywords in C are in _____ letters
(a) lowercase (b) uppercase
(c) symbolic (d) camel case
2. Which of the following is not a valid c variable name?
(a) int number; (b) float rate;
(c) int variable_count; (d) int \$main;

3. What is an example of iteration in C?
(a) for
(b) while
(c) do...while
(d) all of the above
4. The keyword 'break' cannot be simply used within _____.
(a) do-while
(b) if-else
(c) for
(d) while
5. What is right way to Initialize array?
(a) int num [6] = { 2, 4, 12, 5, 45, 5 };
(b) int n{} = {2, 4, 12, 5, 45, 5};
(c) int n{6} = { 2, 4, 12 };
(d) int n (6) = { 2, 4, 12, 5, 45, 5 };
6. What will strcmp() function do?
(a) compares the first n characters of the object
(b) compares the strings
(c) undefined function
(d) copies the string

7. What is the output of following code?

```
#include <stdio.h>
```

```
int main ()
```

```
{
```

```
void foo ();
```

```
printf("1");
```

```
foo();
```

```
}
```

```
Void foo()
```

```
{
```

```
printf("2");
```

```
}
```

(a) 1 2

(b) 2 1

(c) 1 2 2 1

(d) 1 2 1 1

8. The size of a union is determined by the size of the _____ member in the union

(a) first

(b) biggest

(c) last

(d) smallest

9. _____ is used to write a set of characters into a file.

(a) cput()

(b) fprintf()

(c) out()

(d) outfile()

10. Comment on the following Pointer declaration `int * ptr, p;`

(a) ptr is a Pointer to integer, p is not

(b) ptr and p, both are pointers to integer

(c) ptr is pointer to integer, p may or may not be

(d) ptr and p, both are not pointers

PART B — (5 × 5 = 25 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 250 words.

11. (a) Describe C character set.

Or

(b) Explain any two storage classes in C.

12. (a) Develop a C program to find sum of digits of an integer.

Or

(b) Design a C program to check if a number is Positive, negative or zero.

13. (a) Illustrate reading strings from terminal.

Or

(b) Using one-dimensional array as input, write a program to find largest element in that array.

14. (a) Illustrate declaration of structure in C.

Or

(b) Explain declaration and usage of user-defined functions.

15. (a) Choosing pointer of variables, write a C program to exchange the values of variables x and y .

Or

(b) Summarize `fopen()` statement usage in C.

PART C — (5 × 8 = 40 marks)

Answer ALL questions, choosing either (a) or (b).

Each answer should not exceed 600 words.

16. (a) Write a note on data types supported by C.

Or

(b) Write a C program to illustrate the usage of bitwise operators.

17. (a) Describe decision making and branching statements in C.

Or

(b) Using switch statement in a C program to solve quadratic equation.

18. (a) Illustrate the usage of two-dimensional and multi-dimensional arrays with real life arrays.

Or

(b) Write a C program to sort a set of strings

19. (a) Summarize the concepts behind different types of user defined functions in C.

Or

(b) Devise a recursive program to find GCD of two integers using recursion with suitable comments.

20. (a) Consider pointer as function argument and write a program segment to explain this concept.

Or

(b) Criticize the file manipulation in C.