



BRAINWARE UNIVERSITY

Term End Examination 2023-2024

Programme – B.Tech.(CSE)-2023

Course Name – Programming for Problem Solving

Course Code - ESCG101

(Semester I)

Library
Brainware University
398, Ramkrishnapur Road, Ba
Kolkata, West Bengal-70014

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) Select the correct output, a C-style comment, simply surround the text with ____.
- | | |
|--------------|----------------|
| a) /* and */ | b) // and // |
| c) // | d) /** and **/ |
- (ii) Identify the correct option, the C source file is processed by the ____.
- | | |
|----------------------------------|--------------|
| a) Interpreter | b) Compiler |
| c) Both Interpreter and Compiler | d) Assembler |
- (iii) Identify the extension of a C language header file
- | | |
|---------|---------|
| a) .c | b) .cpp |
| c) .c99 | d) .h |
- (iv) Select where r mode in file used for
- | | |
|-----------------|-----------------------------|
| a) reading only | b) both reading and writing |
| c) writing only | d) editing |
- (v) Identify the correct syntax to declare pointer to pointer i.e., double pointer?
- | | |
|---------------------------|----------------------------|
| a) type **pointer_name; | b) type *&pointer_name; |
| c) type *(*pointer_name); | d) type ** (pointer_name); |
- (vi) The meaning of the following C statement? printf("%10s", state);
- | | |
|--|---|
| a) a) 10 spaces before the string state is printed | b) b) Print empty spaces if the string state is less than 10 characters |
| c) c) Print the last 10 characters of the string | d) d) None of the mentioned |
- (vii) Select the value of EOF in C?
- | | |
|-------|---------|
| a) -1 | b) 0 |
| c) 1 | d) Null |
- (viii) Select the correct option, a structure is used to record..... data.
- | | |
|----------------|------------------|
| a) Homogeneous | b) heterogeneous |
| c) continuous | d) None |
- (ix) Choose the correct one that cannot be a structure member.

- a) Another structure
 c) Function
- b) Array
 d) int
- (x) Choose the correct declaration of a int pointer.
- a) int p*
 c) int +p
- b) int *p
 d) int \$p
- (xi) Identify the statements which is/are correct in case of while loop in C
- a) Executes the block till the condition become false
 c) There might be condition when the loop will not execute at all
- b) Is an entry controlled loop
 d) All of these
- (xii) Identify the following parts of the for loop can be eliminated in C?
- a) init
 c) increment
- b) condition
 d) All of these
- (xiii) Evaluate the output of the following C program? #include <stdio.h> int main() { int x[5] = { 10, 20, 30 }; printf("%d", x[3]); return 0; }
- a) 0
 c) Garbage value
- b) 30
 d) Error
- (xiv) Identify who developed C language.
- a) Dennis Rechar
 c) Bjarne Stroustrup
- b) Dennis M. Ritchie
 d) Anders Hejlsberg
- (xv) Identify which of the following is not a valid keyword in C language:
- a) for
 c) do-while
- b) while
 d) switch

Group-B

(Short Answer Type Questions)

3 x 5=15

2. Define the Scope of the variable of in C? (3)
3. Describe nested loop with an example. (3)
4. List out advantages of Structure. (3)
5. Express the syntax of: if statement, if-else statement and nested if-else statement. (3)
6. Justify the Dynamic Memory allocation mention the syntax. (3)

OR

Justify the Bubble Sort Algorithm with a program. (3)

Group-C

(Long Answer Type Questions)

5 x 6=30

7. Define a preprocessor with its usefulness in writing programs? (5)
8. Define algorithm and the steps of the algorithm. (5)
9. Distinguish the different file functions in C language? (5)
10. Justify the static memory allocation and dynamic memory allocation. (5)
11. Illustrate a C program to write data to a file. (5)
12. Justify the top 5 applications of C programming language? (5)

OR

Justify an multi-D array with its major role in C programming? (5)