

M.SC. MATHEMATICS
FIRST SEMESTER
C-PROGRAMMING & MATHEMATICA I
MSM – 106

**SET
B**

[USE OMR SHEET FOR OBJECTIVE PART]

Duration : 2 hrs.

Full Marks : 50

(Objective)

Time: 20 min.

Marks: 15

Choose the correct answer from the following:

1X15=15

1. What will be the output of the following program

```
#include<stdio.h>
void main()
{
    int    *ptr,    a=10;
    ptr = &a;
    *ptr += 1;
    Printf("%d %d", *ptr, a);
}
```

a. 1010
b. 1011
c. 1110
d. 1111
2. What is a structure in C language?
a. A structure is a collection of elements that can be of same datatype.
b. A structure is a collection of elements that can be of different datatype
c. Element of a structure are called members.
d. All of these
3. Basic data types in C are
a. void, int, char, float, double
b. int, char, float, double
c. void, int, char, decimal
d. void, char, int, float, decimal
4. C contains two special pointer operators
a. * and &
b. * and &&
c. & and &&
d. % and %
5. In C , the address of m's memory location can be determined by the expression
a. *m
b. m*
c. &m
d. m&
6. main() is an example of
a. library function
b. user-defined function
c. Header
d. Statement
7. C language was invented by
a. Charles Babbage
b. Dennis Ritchie
c. Bil Gate
d. None of these

8. Which one of the following I/O functions can be used to write a set of data values to a file?
- | | |
|-------------|--------------|
| a. fscanf() | b. fseek() |
| c. getc() | d. fprintf() |
9. Similar type of data are stored on single name is called -----
- | | |
|-------------|-----------------|
| a. an array | b. a structure |
| c. an union | d. all of these |
10. In C language the statement $10 / 4$ will give
- | | |
|--------|------------------|
| a. 2.5 | b. 2 |
| c. 2.0 | d. none of these |
11. #include<stdio.h>
void main()
{
 int y=128;
 int x=y;
 Printf("%d", x);
}
- | | |
|------------------|----------|
| a. garbage value | b. Error |
| c. 128 | d. 0 |
12. The math library is setup for the user by the file
- | | |
|------------|-------------|
| a. float.h | b. limits.h |
| c. math.h | d. time.h |
13. Every C program begins with
- | | |
|--------------|-------------|
| a. main() | b. printf() |
| c. getchar() | d. scanf() |
14. Which of the following is a valid variable name in C language?
- | | |
|-------------|------------|
| a. 1vale | b. 1_value |
| c. 123value | d. _value |
15. In the *if-else* statement, if the test condition or expression is true then-
- | | |
|--|---------------------------------------|
| a. true statements-block is executed | b. false statements-block is executed |
| c. both true and false statements are executed | d. none of these |

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(Descriptive)

Time : 1 hrs. 40 mins.

Marks : 35

[Answer question no.1 & any three (3) from the rest]

1. Write a program in C language to find the largest number amongst three number using if else statement. 5

2. What is a file? What are the different modes in C to open a file? A file called "STUDENT.DAT" contains information such as student roll number, name and total marks. Write a program in C to create this file to store details of n students. 2+3+5
=10

3. What do you mean by structure? How does structure differ from union? Define a structure with the following three members: roll number, name, and total marks of a student. Write a C program to read and display the details of a student. 2+2+6
=10

4. What do you mean by looping? What are the different types looping? Write a program in C to check whether a given number is prime number or not. 2+2+6
=10

5. What is a pointer? Develop a function in C that will swap (exchange) the value of two integer variables. Also write the main program. 2+4+4
=10

6. Explain shortly various decision making statements. Write a program to display salary of an employee, where if salary is less than 20000 taka then add home allowance 5000 taka with basic salary, otherwise display salary without home allowance. 4+6=10

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