

- N.B.
- 1) All questions are compulsory.
  - 2) Figures to the right indicate marks.
  - 3) Illustrations, in-depth answers and diagrams will be appreciated.
  - 4) Mixing of sub-questions is not allowed.

**Q. 1 Attempt All(Each of 5Marks)****15 M****(A) Choose the correct option.**

1. C programs are converted into machine level language with the help of

A. An Editor  
B. B.A compiler  
C. C. An OS  
D. D. none of these

2. What is sizeof() in C?

A. Operator  
B. B. Function  
C. C.Macro  
D. D.Variable

3. Find the output for following code

```
main()
{
int x=10;
{
int x=0;
printf("%d",x);
}
}
```

A. 10  
B. compilation error  
C. C.0  
D. D.undefined

4. What should be the output?

```
void main()
{
int a=10/3;
printf("%d", a);
}
```

- A. 3.33
- B. B. 3.0
- C. 3
- D. 0

5. Find the output for following code?

```
int main()
{
int x;
x= 10,20,30;
printf("%d",x);
return 0;
}
```

- A.10
- B.20
- C.30
- D. compilation error

(B) **Fill in the blanks**

( recursion, local, pointer, type, array,structure)

1. A \_\_\_\_\_ is a variable that represents the location of data item in memory.
2. \_\_\_\_\_ variable declared inside function.
3. \_\_\_\_\_ provides code reusability by calling function with in function.
4. The process of converting one predefined type into another is called \_\_\_\_\_ conversion.
5. \_\_\_\_\_ is a collection of similar type of data.

(c) **Write answer in one or two lines**

1. What is the use of goto statement?
2. What are header files?
3. What is recursive function?
4. What is union?
5. Explain fopen() function.

**Q. 2 Attempt the following (Any THREE)(Each of 5Marks)**

**15M**

- a. Write a simple structure of C program.
- b. Give the difference between interpreters and compilers.
- c. Write a C program to find greatest number among three numbers.
- d. Write a note on scope of variable in C.
- e. Explain increment and decrement operator with example.
- f. Explain while and do while loop with proper example.

**Q. 3 Attempt the following (Any THREE) (Each of 5Marks)**

15M

- (a) Write a c program to show the use of one dimensional array.
- (b) Compare C array and list with tuple in python.
- (c) Explain following functions:  
getchar(), getch(), getche()
- (d) Write a C program using function to find whether entered number is prime or not?
- (e) Explain following string functions with proper example:  
strcmp(), strcat(), strlen()
- (f) What is recursion ? Explain with proper example.

**Q. 4 Attempt the following (Any THREE) (Each of 5Marks)**

15M

- (a) What are different memory allocation functions? Explain with proper example.
- (b) Create a structure student with roll no, name, contact number, marks. Accept name and marks from student and find grade for it. (grade A for 65 or above, grade B for 55 to 64, grade C for 40 to 54 and grade F for below 40).
- (c) Write a note on different types of files.
- (d) Explain different file modes in details.
- (e) Explain pointers as function arguments with proper example.
- (f) Compare C garbage collection with Python garbage collection.

**Q. 5 Attempt the following (Any THREE) (Each of 5Marks)**

15M

- (a) Explain following functions :  
fopen(), fclose(), fgetc(), fgets(), fread()
- (b) Write a note on local and global variable.
- (c) Explain use of goto statement with proper example.
- (d) How break statement can be used in switch statement?
- (e) Write a note on type conversion.