

(v) What will be the output of the following C code?

```
#include <stdio.h>
int main()
{
    int main = 3;
    printf("%d", main);
    return 0;
}
```

- (a) It will cause a compile-time error
 - (b) It will cause a run-time error
 - (c) It will run without any error and prints 3
 - (d) It will experience infinite looping
- (vi) What will be the output of the following C code on a 64 bit machine?

```
#include <stdio.h>
union Sti
{
    int nu;
    char m;
};
int main()
{
    union Sti s;
    printf("%d", sizeof(s));
    return 0;
}
```

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- (a) 8
 - (b) 5
 - (c) 9
 - (d) 4
- (vii) What will be the final value of x in the following C code?

```
#include <stdio.h>
void main()
{
    int x = 5 * 9 / 3 + 9;
}
```

- (a) 3.75
- (b) Depends on compiler
- (c) 24
- (d) 3

2. (a) Write difference between algorithm and flowchart. (2)
- (b) Why do we use header files? (2)
- (c) What is the purpose of adding comments in a program? (2)
- (d) Define Searching? Explain linear search method with an program and example? (2+3=5)
- (e) What are the components of the computer systems? Explain with block diagram. (4)
3. (a) What do you meant by linking? (2)
- (b) Difference between Local and Global variable in C. (2)
- (c) What is the difference between '=' and '==' operator? (3)
- (d) Distinguish between while..do and do..while statement in C. (4)
- (e) Mention the various Decisions making statement available in C. (4)
4. (a) What are the types of I/O statements available in 'C'? Give examples. (2+2=4)
- (b) What is the difference between scanf() and gets() function? (4)
- (c) What is an array? Why is it necessary to give the size of an array in an array declaration? (3)
- (d) What are functions in C? How will define a function in C? (2+2=4)
5. (a) What is a Pointer? How a variable is declared to the pointer? What are the uses of Pointers? (2+2+2=6)
- (b) Write a C program for factorial using recursion function. (4)
- (c) What is dynamic memory allocation? What are the various dynamic memory allocation functions? (2+3=5)
6. (a) Compare structures and unions. (3)
- (b) What are storage classes? What are the storage classes available in C? (2+4=6)
- (c) What is File Pointer? Write a program in C to copy the content of a file to another file. (2+4=6)
7. (a) Write a program in C to sort the elements of an integer array. (7)
- (b) Write a program using function to add two matrices. (8)

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