

Chapter 1

C Programming

1. Write a c-program to count the number of lines, words, characters in the input. Use getchar() to read the input.
2. In C programming function parameters are passed by value or reference?
3. Write a program that reads a set of text lines and prints the longest Use an array to store any line read from the keyboard.
4. Write a function that reverses the given character string s.
5. What is the o/p printed by the program?

```
1  #include <stdio.h>
2  int main()
3  {
4      char *s = "Hello"    "world";
5      printf("%s", s);
6      return 0;
7  }
8
```

- (a) Compiler error
 - (b) Hello
 - (c) world
 - (d) Helloworld
6. What is the output of the program?

```
1  #include <stdio.h>
2  int main()
3  {
4      printf("%d", atoi("12b3c"));
5  }
6  int atoi(char s[]) {
7      int i, n = 0;
8      for(i=0; s[i]>='0' && s[i] <= '9'; ++i)
```

```
9     n = 10 * n + (s[i] - '0');
10     return n;
11 }
12
```

7. What would this program do to x?

```
1     unsigned getbits(unsigned x, int p, int n)
2     {
3         return (x >> (p + 1 - n)) & ~ (~0 << n);
4     }
5
```

8. What is the output of the below program?

```
1     int main() {
2         int x = 5, y = 7;
3         x *= y + 1;
4         printf("%d", x);
5     }
6
```

9. What is the output of the below program?

```
1     int surprise(unsigned x) {
2         int b;
3         for(b = 0; x != 0; x >>= 1)
4             if(x&01)
5                 B++;
6         return b;
7     }
8
```

10. What is the x value printed?

```
1     int x = 5;
2     int main() {
3         f() + g();
4         printf("%d", x);
5     }
6     void f(){
7         x = x * 5;
8     }
9     void g(){
10        x = x + 4;
11    }
12
```