

```

1. #include <stdio.h>
static int y = 1; // file scope
int main() {
    static int x; // error -- data type is must.
                // storage class if not given in function, then it is
auto.
                // if given then it can be static or register (as
given).
    static int z; // function scope
    printf("%d %d", y, z);
    // y = 1, z = 0
    return 0;
}

```

Answer 1: Garbage value

Answer 2: 0 0

*** Answer 3: 1 0

Answer 4: 1 1

2. What will be the storage class of variable i in the code written below?

```

#include<stdio.h>
int main() {
    int i = 10; // auto int i = 10;
    printf("%d", i);
    return 0;
}

```

*** Answer 1: Automatic/local storage class

Answer 2: Extern storage class

Answer 3: Static storage class

Answer 4: Register storage class

```

3. void fn() {
    static int i=10; // initialized only once -- in data section -- so
not destroyed
    printf("%d",++i); // in first call fn() --> ++10 --> 11
                    // in first call fn() --> ++11 --> 12
}
int main(void) {
    fn();
    fn();
}

```

Answer 1: 10 10

Answer 2: 11 11

*** Answer 3: 11 12

Answer 4: 12 1

4. Value of static storage variable (similar to global variables)

Answer 1: Changes during different function calls

*** Answer 2: persist between different function calls

Answer 3: increases during different function calls

Answer 4: decreases during different function calls

```
5. #include <stdio.h>
int main() {
    register static int i = 10; // error: register vars cannot be
    global or static.
    i = 11;
    printf("%d\n", i);
}
```

Answer 1: 10

*** Answer 2: Compile time error

Answer 3: Undefined behaviour

Answer 4: 11

```
7.
#include <stdio.h>
int main(void) {
    extern int var=1000; // in declaration, var should not be
    initialized --> error
    printf("var = %d",++var);
    return 0;
}
// can be initialized in definition: int var = 1000;
```

Answer 1: var = 1000

Answer 2: var = 0

Answer 3: var = 1001

*** Answer 4: compile time error