

Sonata Sample Technical Paper

- Point out error, if any, in the following program

```
main()
{
    int i=1;
    switch(i)
    {
        case 1:
            printf("\nRadioactive cats have 18 half-lives");
            break;
        case 1*2+4:
            printf("\nBottle for rent -inquire within");
            break;
    }
}
```

Ans. No error. Constant expression like $1*2+4$ are acceptable in cases of a switch.

- Point out the error, if any, in the following program

```
main()
{
    int a=10,b;
    a>= 5 ? b=100 : b=200;
    printf("\n%d",b);
}
```

Ans. lvalue required in function main(). The second assignment should be written in parenthesis as follows:

```
a>= 5 ? b=100 : (b=200);
```

- In the following code, in which order the functions would be called?

```
a= f1(23,14)*f2(12/4)+f3();
```

a) f1, f2, f3 b) f3, f2, f1

c) The order may vary from compiler to compiler d) None of the above

- What would be the output of the following program?

```
main()
{
    int i=4;
    switch(i)
    {
        default:
            printf("\n A mouse is an elephant built by the Japanese");
        case 1:
            printf(" Breeding rabbits is a hair raising experience");
            break;
        case 2:
            printf("\n Friction is a drag");
            break;
        case 3:
            printf("\n If practice make perfect, then nobody's perfect");
    }
}
```

- a) A mouse is an elephant built by the Japanese b) Breeding rabbits is a hare raising experience
- c) All of the above d) None of the above

- What is the output of the following program?

```
#define SQR(x) (x*x)
main()
{
    int a,b=3;
    a= SQR(b+2);
    printf("%d",a);
}
```

- a) 25 b) 11 c) error d) garbage value

- In which line of the following, an error would be reported?

1. #define CIRCUM(R) (3.14*R*R);

```
2. main()
3. {
4. float r=1.0,c;
5. c= CIRCUM(r);
6. printf("\n%f",c);
7. if(CIRCUM(r)==6.28)
8. printf("\nGobbledygook");
9. }
```

a) line 1 b) line 5 c) line 6 d) line 7

- What is the type of the variable b in the following declaration?

```
#define FLOATPTR float*
FLOATPTR a,b;
```

a) float b) float pointer c) int d) int pointer

- In the following code;

```
#include<stdio.h>
```

```
main()
```

```
{
FILE *fp;
fp= fopen("trial","r");
}
```

fp points to:

a) The first character in the file.

b) A structure which contains a "char" pointer which points to the first character in the file.

c) The name of the file. d) None of the above.

- We should not read after a write to a file without an intervening call to fflush(), fseek() or rewind() < TRUE/FALSE >

Ans. True

- If the program (myprog) is run from the command line as myprog 1 2 3 , What would be the output?

```
main(int argc, char *argv[])
```

```
{
int i;
```

```
for(i=0;i<argc;i++)
printf("%s",argv[i]);
}
```

a) 1 2 3 b) C:\MYPROG.EXE 1 2 3

c) MYP d) None of the above

- If the following program (myprog) is run from the command line as myprog 1 2 3, What would be the output?

```
main(int argc, char *argv[])
{
int i,j=0;
for(i=0;i<argc;i++)
j=j+ atoi(argv[i]);
printf("%d",j);
}
```

a) 1 2 3 b) 6 c) error d) "123"

- If the following program (myprog) is run from the command line as myprog monday tuesday wednesday thursday,

What would be the output?

```
main(int argc, char *argv[])
{
while(--argc >0)
printf("%s",*++argv);
}
```

a) myprog monday tuesday wednesday thursday b) monday tuesday wednesday thursday
c) myprog tuesday thursday d) None of the above

- In the following code, is p2 an integer or an integer pointer?

```
typedef int* ptr
ptr p1,p2;
```

Ans. Integer pointer

- Point out the error in the following program

```
main()
{
```

```
const int x;  
x=128;  
printf("%d",x);  
}
```

Ans. x should have been initialized where it is declared.

- What would be the output of the following program?

```
main()  
{  
int y=128;  
const int x=y;  
printf("%d",x);  
}
```

a) 128 b) Garbage value c) Error d) 0

- What is the difference between the following declarations?

```
const char *s;  
char const *s;
```

Ans. No difference

- What would be the output of the following program?

```
main()  
{  
char near *near *ptr1;  
char near *far *ptr2;  
char near *huge *ptr3;  
printf("%d %d %d",sizeof(ptr1),sizeof(ptr2),sizeof(ptr3));  
}
```

a) 1 1 1 b) 1 2 4 c) 2 4 4 d) 4 4 4

- If the following program (myprog) is run from the command line as myprog friday tuesday sunday,

What would be the output?

```
main(int argc, char*argv[])  
{  
printf("%c",**++argv);
```

```
}
```

a) m b) f c) myprog d) friday

- If the following program (myprog) is run from the command line as myprog friday tuesday sunday,

What would be the output?

```
main(int argc, char *argv[])
```

```
{
```

```
    printf("%c",*++argv[1]);
```

```
}
```

a) r b) f c) m d) y

- If the following program (myprog) is run from the command line as myprog friday tuesday sunday,

What would be the output?

```
main(int argc, char *argv[])
```

```
{
```

```
    while(sizeofargv
```

```
        printf("%s",argv[--sizeofargv]);
```

```
}
```

a) myprog friday tuesday sunday b) myprog friday tuesday

c) sunday tuesday friday myprog d) sunday tuesday friday

- Point out the error in the following program

```
main()
```

```
{
```

```
    int a=10;
```

```
    void f();
```

```
    a=f();
```

```
    printf("\n%d",a);
```

```
}
```

```
void f()
```

```
{
```

```
    printf("\nHi");
```

```
}
```

Ans. The program is trying to collect the value of a "void" function into an integer variable.

- In the following program how would you print 50 using p?

```
main()
```

```
{  
  int a[]={10, 20, 30, 40, 50};  
  char *p;  
  p= (char*) a;  
}
```

Ans. `printf("\n%d",*((int*)p+4));`

- Would the following program compile?

```
main()
```

```
{  
  int a=10,*j;  
  void *k;  
  j=k=&a;  
  j++;  
  k++;  
  printf("\n%u%u",j,k);  
}
```

- a) Yes b) No, the format is incorrect
- c) No, the arithmetic operation is not permitted on void pointers
- d) No, the arithmetic operation is not permitted on pointers

- According to ANSI specifications which is the correct way of declaring main() when it receives command line arguments?

- a) `main(int argc, char *argv[])` b) `main(argc,argv) int argc; char *argv[];`
- c) `main() {int argc; char *argv[]; }` d) None of the above

- What error would the following function give on compilation?

```
f(int a, int b)  
{  
  int a;  
  a=20;
```

```
return a;
}
```

a) missing parenthesis in the return statement b) The function should be declared as int f(int a, int b)

c) redeclaration of a d) None of the above

- Point out the error in the following program

```
main()
{
const char *fun();
*fun()='A';
}
const char *fun()
{
return "Hello";
}
```

Ans. fun() returns to a "const char" pointer which cannot be modified

- What would be the output of the following program?

```
main()
{
const int x=5;
int *ptrx;
ptrx=&x;
*ptrx=10;
printf("%d",x);
}
```

a) 5 b) 10 c) Error d) Garbage value

- A switch statement cannot include

a) constants as arguments b) constant expression as arguments

c) string as an argument d) None of the above

- How long the following program will run?

```
main()
{
```

```
printf("\nSonata Software");
```

```
main();
```

```
}
```

a) infinite loop b) until the stack overflows

c) All of the above d) None of the above

- On combining the following statements, you will get char*p; p=malloc(100);

a) char *p= malloc(100) b) p= (char*)malloc(100)

c) All of the above d) None of the above

- What is the output of the following program?

```
main()
```

```
{
```

```
int n=5;
```

```
printf("\nn=%*d",n,n);
```

```
}
```

a) n=5 b) n=5 c) n= 5 d) error

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