Sonata Software Technical Questions

Part - A:

1. In which order the functions shall be called in the below mentioned code.

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

a. The order may vary from compiler to compiler
b. F1, f2, f3
c. F3, f2, f1
d. None of the above

2. Find the output of the below mentioned 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);
Case 2:
printf(\n Friction is a drag);
break;
Case 3:
printf(\n If practice make perfect, then nobody's perfect)
}
}
```

a. Breeding rabbits is a hare raising experience
b. A mouse is an elephant built by the Japanese
c. All of the above

d. None of the above

3. Locate the error in the below mentioned lines.

```
1.  #define CIRCUM(R) (3.14*R*R);
2.  Main()
3.  {
4.  Float r=1.0,c;
5.  C=CIRCUM(r);
6.  printf(\nGobbledygook);
7.  printf(\n%f,c);
8.  If(CIRCUM(r))==6.28
9.  }
```

a. Line 7
b. Line 1
c. Line 6
d. Line 5

4. Choose the type of the variable in the following declaration?

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

a. Integer
b. Integer pointer
c. Float pointer
d. Float

5. typedef int*ptr

```
ptr p1, p2;
```

In the above mentioned code, P2 should be an integer or an integer pointer?

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6. Point out the error in the below mentioned program?

```
main()
{
Constant integer x;
X=128;
Printf(%d,x);
}
```

7. State the difference between the following declarations.

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

8. What shall be the following program compile?

```
main()
{
Int a= 10, *j;
void*k;
J=k=&a;
J++;
K++;
printf(\n%u%u,j,k);
```

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

9. How long the below mentioned program will run?

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```
Main()
{
Printf(\nSonata Software);
Main():
}
```

a. Until the stack overflows
b. Infinite loop
c. All of the above
d. None of the above

10. On combining char*p;p=malloc(100); what shall you get?

a. P=(char*)malloc(100)
b. Char*p=malloc(100)
c. All of the above
d. None of the above

PART - B:

Q1. Point out error, if any, in the following program

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

```
}
}
```

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

Q2. Point out the error, if any, in the following program

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

ANS: l value required in function main(). The second assignment should be written in parenthesis as follows: a>= 5 ? b=100 : (b=200);

Q3. 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

Q4. What would be the output of the following program?

```
main()
{
int i=4;
```

```
 switch(i)
 {
 default:
 printf( A mouse is an elephant built by the Japanese);
 case 1:
 printf( Breeding rabbits is a hair raising experience);
break;
case 2:
printf( Friction is a drag);
break;
case 3:
printf( If practice make perfect, then nobodys 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

Q5. 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

Q6. 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( %f,c);
7. if(CIRCUM(r))==6.28)
8. printf( Gobbledygook);
9. }
```

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

Q7. 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

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Q8. 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.

Q9. We should not read after a write to a file without an intervening call to

fflush(), fseek() or rewind() < TRUE/FALSE>

ANS: True

Q10. 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

Q11. 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

Q12. 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

Q13. In the following code, is p2 an integer or an integer pointer?

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

ANS: Integer pointer

Q14. 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.

Q15. 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

Q16. What is the difference between the following declarations?

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

ANS: No difference

Q17. 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

Q18. 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

Q19. 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

Q20. 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

Q21. Point out the error in the following program

```
main()
 {
  int a=10;
  void f();
  a=f();
  printf( %d,a);
  }
  void f()
   {
   printf( Hi);
   }
```

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

Q22. 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(%d,*((int*)p+4));

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Q23. Would the following program compile?

```
main()
 {
  int a=10,*j;
  void *k;
  j=k=&a;
  j++;
  k++;
  printf( %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

Q24. 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

Q25. 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

Q26. 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

Q27. 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

Q28. A switch statement cannot include

a) constants as arguments
b) constant expression as arguments
c) string as an argument
d) None of the above

Q29. How long the following program will run?

```
main()
{
printf( Sonata Software);
main();
}
```

a) infinite loop
b) until the stack overflows
c) All of the above
d) None of the above

Q30. 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

Q31. What is the output of the following program?

```
main()
 {
  int n=5;
  printf( n=%*d,n,n);
 }
```

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