

1. The following function prints out the given number on the console in binary form. Complete the function by filling in the line(s) left blank in a box..

```
void PrintBin(unsigned long X){
    unsigned long M=0x80000000;
myloop:
    switch(X&M){
        case 0 : printf("0"); break;
        default: printf("1");
    }
    if(M>>=1) goto myloop;
}
```

2. What is the output of the following program?

```
int main(void){
    unsigned long A=0xAAAAAAAA, B=0BBBBBBBB, C=15;
    printf("\n%d", (A^B)&(C|0x10));
    return 0;
}
```

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3. What is the output of the following program?

```
int main(void){
    int a=1;
    a+=(++a * a-- +(a<1));
    printf("%d\n", a);
    return 0;
}
```

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4. What is the output of the following program?

```
int main(void){
    int a=1, b=2, c=3, d=4;
    if((a==b)&&!((a|b)>c)) printf("a");
    else printf("b"); printf("d");
    if((a<b)|| (c>=a)) printf("c");
    else printf("d");
    return 0;
}
```

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5. What is the output of the following program?

```
int foo(int a){ printf("%d++", a++); return a; }
int main(){ int b=3;
    b=foo(b); foo(b);
    foo(1+foo(b));
    return 0;
}
```

3++4++4++6++

6. What is the output of the following program?

```
int main(){ int x=2,y=1;
L1: printf("%x",x); y=2;
L2: printf("%d",y);
    if(--y) goto L2;
    if(x--) goto L1;
    return 0;
}
```

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7. What is the output of the following program?

```
double foo(int n){ return ++n/2.0; }
int fii(double f){ return (int)f; f+=1;}
int main(){
    double X=6.6;
    printf("%0.2lf ",foo((int)X));
    printf("%0.2lf", (double)fii(foo((int)X)));
    return 0;
}
```

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8. What should be the formatting string in the following `printf` statement when the output is as given?

```
printf( .?. ,x,x,i,i,i);
```

output **X= 3.14 Y= 3.1 i= 28 i=28 i=1c**

format **"X=%5.2lf Y=%4.1lf i=%4d i=%2d i=%x"**