71. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
  int k=10;
  switch(k)
  {
        case '5':
        case '10':
              k++;
              continue;
        case '15':
        case '20':
              k– –;
  }
  return 0;
}
```

(a) 10 (b) 11

(c) Error (d) No output

Q12)

```
#include <stdio.h>
int main()
{
    int k = 10;
    switch (k)
    {
        case '5':
        case '10':
            k++;
            continue;
        case '15':
        case '20':
            k--;
    }
    return 0;
}
```

(c) Error Ans

k = 11
k = 12
k = 13
k = 14
k = 15

Error, because continue can't be used inside switch.

72. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
  int var=2,x=1,y=2;
  switch(var)
  {
      case x:
          x++;
          break;
      case y:
          y++;
          break;
  }
  return 0;
}
```

(a) 3 (b) 2 (c) 4 (d) Error

(d) #include <stdio.h>
int main()
{ int var = 2, x=1, y=2;
switch (var) → (2)
{ case (x):
x++; break;
case y:
y++; break;
}
}

→ x → Constant

Error, because constant can't be used in case

Teacher's Signature .....

73. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
  int i, total=0;
  for(i=1; i<=10; i++)
  {
        switch(i)
        {
              case 1:
              case 4:
              case 5:
              case 7:
                    total+=i;
                    break;
              default:
                    continue;
        }
        printf("%d\t",i);
  }
  printf("total=%d\n", total);
  return 0;
}
```

(a) 1 4 5 7 total = 17

(b) 1 5 4 7 total = 15

(c) 1 7 5 4 total = 14

(d) 5 4 7 1 total = 17

(a) 73)

```
#include<stdio.h>
int main()
{ int i, total = 0;
  for (i=1; i<=10; i++)
  { switch(i)
    {
      case 1:
      case 4:
      case 5:
      case 7:
          total = total + i;
          break;
      default:
          continue;
    }
    printf("%d", i);
}
printf("total = %d", total);
return 0;
}
```

i = 1 → total = 0 + 1
i = 4 → total = 1 + 4
i = 5 → total = 5 + 5
i = 7 → total = 10 + 7 = 17

(a) 1 4 5 7 total = 17

74. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{  int x=2,y=20;
   switch(x)
   {
                    y=30;
      case 1:
                    y++;
                    break;
      case 2:
                    y– –;
                    break;
      default:
                    y=y+2;
   }
   printf("y is %d\n",y);
   return 0;
}
```

(a) y is 20

(b) y is 19

(c) y is 17

(d) y is 18

(b) 74)

```
#include <stdio.h>
int main()
{
    int x=2, y=20;
    switch (x)
    {
    y = 30;
    case 1:
        y+1;
        break;
    case 2:
        y--; break;
    default:
        y = y+2;
    }
    printf("%d", y);
    return 0;
}
```

ignored by compiler

y = y-1
y = 19

75) (b) y is 19

75. What is the output of the following program?

```
/*(i)*/
#include<stdio.h>
int main(void)
{       int a=5;
        begin:
        if(a)
        {
                printf("%d\t",a);
                a– –;
                goto begin;
        }
        return 0;
}
```

```
/*(ii)*/
#include<stdio.h>
int main(void)
{
        int a=5;
        begin:
        if(a)
        printf("%d  ",a);
        a– –;
        goto begin;
        return 0;
}
```

(a) (i) 5 4 3 2 1
(ii) 5 5 4 3 2

(b) (i) 5 4 3 2 1
(ii) infinite loop

(c) (i) 1 2 3 4 5
(ii) No output

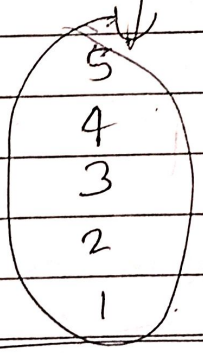
(d) None of these

75) /* i */

```
#include<stdio.h>
int main()
{ int a=5;
  begin:
  if (a)
  { printf("%d",a);
    a--;
  goto begin;
  }
  return 0;
}
```

/* ii */

```
#include<stdio.h>
int main()
{ int a=5;
  begin:
  if (a)
  printf("%d",a);
  a--;
  goto begin;
  return 0;
}
```



(b) (i) 5 4 3 2 1

(ii) Infinite Loop

76. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
        int a,b;

        /* (a) */
        while(–1)
        {
                printf("Test Loop\n");
        }

        /* (b) */
        while(!0)
        {
                printf("Test Loop\n");
        }
```

```
/* (c) */
while(0)
{
        printf("Test Loop\n");
}
/* (d) */
a=0;
while(a=0)
{
        printf("Test Loop\n");
}
/* (e) */
a=0;
while(a=2)
{
        printf("Test Loop\n");
}
/* (f) */
a=0,b=1;
while(a=b)
{
        printf("Test Loop\n");
}
/* (g) */
a=1,b=0;
while(a=b)
{
        printf("Test Loop\n");
}
return 0;
}
```

76)
```
#include <stdio.h>
int main()
{ int a, b;
/*(a)*/ while(-1) { printf("Test Loop"); }
/*(b)*/ while(10) { printf("Test Loop"); }
/*(c)*/ while(0) { // }
(d) a=0; while(a=0) { // }
(e) a=2; while(a=2) { // }
(f) a=0, b=1; while(a=b) { // }
(g) a=1, b=0; while(a=b) { // }
    return 0;
}
```

Non-zero (Always true)

-1 → Infinite Loop

10 → Infinite Loop

0 → False

a=0 → False

a=2 → Infinite Loop

a=b, b=1 → Infinite Loop

a=1, b=0 → False

a=0

a=b, b=1 → a=1 → always true

Conclusion

/*a*/ → Infinite Loop
/*b*/ → Infinite Loop
/*c*/ → False (No Loop)
/*d*/ → False (No Loop)
/*e*/ → Infinite Loop
/*f*/ → Infinite Loop
/*g*/ → False (No Loop)

Teacher's Signature .....

77. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
 int i,j;

 /*(i)*/
 for(i=0; i<10; i++)
 printf("%d ",i);

 /*(ii)*/
 for(i=1; i<=10; i++)
 printf("%d ",i);

 /*(iii)*/
 for(i=0; i<=10; i++)
 printf("%d ",i);

 /*(iv)*/
 for(i=1; i<10; i++)
 printf("%d ",i);

 /*(v)*/
 for(i=0; i<=10; i--)
 printf("%d ",i);

 /*(vi)*/
 for(i=10; i>=1; i--)
 printf("%d ",i);

 /*(vii)*/
 for(i=10; i>1; i--)
 printf("%d ",i);

 /*(viii)*/
 for(i=10; i>0; i--)
 printf("%d ",i);

 /*(ix)*/
 for(i=15; i>=0; i=i - 3)
 printf("%d ",i);

 /*(x)*/
 for(i=10; i>=0; i--);
 printf("%d ",i);

 /*(xi)*/
 for(i=0; i>10; i++)
 printf("%d ",i);

 /*(xii)*/
 for(i=0; i<=10; i+=20)
 printf("%d ",i);

 /*(xiii)*/
 for(i=1;  i!=10;  i=i+2)
 printf("%d ",i);

 /*(xiv)*/
 for(j=10; i=j; j-=2)
 printf("%d ",i);

 /*(xv)*/
 for(i=10; i--; )
 printf("%d ",i);
 return 0;
}
```

Q7) /*(i)*/ → for(i=0; i<10; i++)
printf("%d", i);

0, 1 2 3 4 5 6 7 8 9

/*(ii)*/ → (i=1, i<=10, i++)

1 2 3 4 5 6 7 8 9 10

/*(iii)*/ → (i=0; i<=10; i++)

0 1 2 3 4 5 6 7 8 9 10

/*(iv)*/ → (i=1; i<10; i++)

1 2 3 4 5 6 7 8 9

/*(v)*/ → (i=0; i<=10; i--)

(Infinite Loop)

/*(vi)*/ → (i=10; i>=1; i--)

10 9 8 7 6 5 4 3 2 1

/*(vii)*/ → (i=10; i>1; i--)

10 9 8 7 6 5 3 2

/*(viii)*/ → (i=10; i>0; i--)

10 9 8 7 6 5 4 3 2 1

/*ix*/ → (i=15; i>=0; i=i-3)

15 12 9 6 3 0

/*(x)*/ → (i=10; i>=0; i++)

-1

terminate

/*(xi)*/ → (i=0; i>10; i++)

0>10 False

/*(xii)*/ → (i=0; i<=10; i=i+20)

0

/*(xiii)*/ → (i=1; i!=10; i=i+2)

1 3 5 7 9 11 13 15 ——

never → i==10

Infinite Loop

/*(xiv)*/ → (a=10; i=j; a=a-2)

10 8 6 4 2

0=0
i j

terminate

/*(xv)*/ → (i=10; i--;)

9 8 7 6 5 4 3 2 1 0

Teacher's Signature .....

78. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
  int i;
  for(i=1; i<5; i++);
  printf("%d ",i);

  /*
  i=10;
  while(i<5);
  printf("%d ",i++);
  */

  /*
  i=0;
  while(i<5);
  printf("%d",i++);
  */
  return 0;
}
```

(a) 5 (b) 6 (c) 9 (d)10

(a) 78) #include <stdio.h>

```
int main()
{
    int i;
    for (i = 1; i < 5; i++);
        printf ("%d", i);
    /*  ____  */
    return 0;
}
```

terminate

Comment
No execute

last value print

(a) 5

79. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
  int i=1;
  while(i++ < 5)
  printf("%d ",i);
  printf("\n");
  i=1;
  while(++i < 5)
  printf("%d ",i);
  printf("\n");
  i=6;
  while(i--)
  printf("%d ",i);
  return 0;
}
```

79⇒
```
#include<stdio.h>
int main()
{ int i=1;
  while(i++<5)
      printf("%d", i);
  printf("\n");
  i=1;
  while(++i<5)
      printf("%d", i);
  i=6;
  while(i--)
      printf("%d", i);
}
```

2 3 4 5

2 3 4

5 4 3 2 1 0

Ans

Teacher's Signature .....

80. What is the output of the following program?

```
#include<stdio.h>
int main(void)
{
  int a=6,b=4;
  while(a+b)
  {
      printf("a=%d, b=%d\n", a, b);
      a/=2;
      b%=3;
  }
  return 0;
}
```

(a) a = 9, b = 4

(b) a = 1, b = 1

(c) a = 0, b = 1

(d) Infinite loop

(d) 80⇒

```
#include<stdio.h>
int main()
{ int a=6, b=4;
  while(a+b)   // while(10)
  {
    printf("a=%d", b=%d", a,b);
    a = a/2;
    b = b%3;
  }
  return 0;
}
```

Output

a = 6 , b = 4
a = 3 , b = 1
a = 1 , b = 1
a = 0 , b = 1
a = 0 , b = 1

(d) Infinite Loop