Computer Science - ICS Part 2 Computer Science Chapter 12 Short Questions Preparation

Q1. What is sentinel controlled loop?

Ans 1: One way to do this is to instruct the user to enter a unique data value, called a sentinel value, after the last data item . The loop condition test s each data item and causes loop exit when the sentinel value is read. Choose the sentinel value is read.Choose the sentinel value carefully;
It must be a value that could not normally occur as data. The general form of a sentinel-controlled loop is;

1. Get the first line of data
2. While the sentinel value has not been encountered
3. Process the data line.
4. Get another line of data

Q2. Convert the following code into while loop.

```
For (int i =1;i< =10;i ++)
{
Printf("\nPakistan");
}
```

Ans 1: Conversion:

```
Void main ( )
{
Int i =1;
While(i< =10)
{
Printf("%\n",I);
I =i+1;
}}
```

Q3. Trace the erros of the following code.

```
Void main( )
{
Int x, y= 5;
For (x= 0; x < 3;x ++)
If (y > =5)
Print f ("%s\t",x);
}
```

Ans 1: Errors:
0 1 2

Q4. Define nested loop.

Ans 1: Nested Loop: Nested loop mean a loop inside the body of another loop.Nesting can be done up to any level. But as the level of nesting increase, the complexity of the nested loop also increase . There is no instruction on the type of loops (while , do-while , or for) that may be placed in the body of other loops.
Example: we can place one or more while or so-while loops in the body for the loop. Similarly, one or more for loops can be placed

in the body of while or do -while loop.

Q5. Trace the output.

```
Int I, j =10;
For (I = 1; i< =5; i + +)
{
Printf("\nPakistan");
}
```

Ans 1: Output:

```
Pakistan
Pakistan
Pakistan
Pakistan
Pakistan
```

Q6. Convert the following loop Code into for loop code.

```
i= 3;
Do
{
Printf ("%d/n",i);
I + =3;
}
While (i < =21);
```

Ans 1: Conversion

```
Void main
{
int i:
for (i =3; i<=21; i + =3)
printf ("%d\n",i);
}
```

Q7. Predict the output of the following piece of code .

```
Int I =1;
While.(i< =5)
{
Printf ("Pakistan");
I ++;
}
```

Ans 1: Output:

```
Pakistan
Pakistan
Pakistan
Pakistan
Pakistan
Pakistan
```

Q8. Trace the output .

```
Int a =1;
While (a < =6)
{
printf("\n a=%d",a)
```

a+ =1;
}

Ans 1: Output: 1
2
3
4
5
6

Q9. Define While Loop.

Ans 1: The while loop keeps repeating associated statements until the specified condition becomes false. This is useful where the programmer does not know in advance how many times the loop will be traversed.The dyntax o the while statement is
While (condition)
}
statements(S);
}
The condition in the while loop controls iteration. The statements which are executed when the given condition is true,from the body of the loop. If the condition is true, the body of the loop is executed . As soon as it becomes false, the loop terminates immediately.

Q10. Rewrite the following code using do-while loop.
Int x= 10;
While (x> =1)
{ printf ("%d", x%2);
x--;
}

Ans 1: Rewrite in do-while loop:
Void main ( )
{
Int x = 10;
Do
{
Printf("%d\n",x%2);
X=x-1;
}while (n>=1);
}
