MCQs on Loops in C

Question	Code Snippet	Answers	Correct Answer	Explanation
1	for (int i = 1; i <= 5; i++) { printf("%d ", i); }	a) Prints 1 to 4 b) Prints 1 to 5 c) Infinite loop d) Compile time error	b)	The loop iterates 5 times, printing i from 1 to 5.

2	int sum = 0;
	for (int j = 0; j < 3; j++)
	{ sum += j; }
	printf("Sum: %d\n", sum);
		a) Sum: 0
		b) Sum: 3
		c) Sum: 6
		d) Compile time error
			c)	The loop adds j to sum in each iteration (0 + 1 + 2).

3	int i = 10;
	while (i > 0)
	{
	printf("%d ", i);
	i--;
	}
		a) Prints 1 to 10
		b) Prints 10 to 1
		c) Infinite loop
		d) Compile time error
			b)	The loop decrements i in each iteration, printing it until i becomes 0 (inclusive).

4	for (int k = 1; k <= 4; k++)
	{
	if (k == 3) continue; printf("%d ", k);
	}
		a) Prints 1 2 4
		b) Prints 1 2 3 4
		c) Prints 3 4
		d) Compile time error
			a)	The continue statement skips printing k when it's 3.

5	int num = 1;
	do {
	printf("%d ", num);
	num *= 2;
	} while (num <= 16);
		a) Prints 1 2 4 8
		b) Prints 1 2 4 8 16
		c) Infinite loop
		d) Compile time error
			b)	The do-while loop ensures at least one execution. num is doubled in each iteration.

6	for (int i = 0; i < 10; i++)
	{
	if (i % 2 == 0) break; printf("%d ", i);
	}
		a) Prints all even numbers less than 10
		b) Prints all odd numbers less than 10
		c) Prints 0
		d) Compile time error
			b)	The loop breaks when i is even, printing only odd numbers.

7	int factorial = 1;
	for (int i = 1; i <= 5; i++)
	{ factorial *= i; } printf("Factorial of 5: %d\n", factorial);
		a) Factorial of 5: 24
		b) Factorial of 5: 120
		c) Infinite loop
		d) Compile time error
			b)	The loop calculates the factorial of 5 (1 * 2 * 3 * 4 * 5).

8	int count = 0;
	while (count < 5)
	{
	printf("*");
	count++;
	}
		a) Prints *
		b) Prints *****
		c) Infinite loop
		d) Compile time error
			b)	The loop prints * 5 times and increments count in each iteration.

9	for (int i = 1; i <= 6; i++)
	{
	for (int j = 1; j <= i; j++)
	{
	printf("%d ", j);
	}
	printf("\n");
	}
		a) Prints a square
		b) Prints a triangle
		c) Compile time error
		d) Unexpected output
			b)	The nested loop creates a right triangle pattern.