Pseudocode Questions file 4

Dated 21-10-2025

Q1. Trace through this nested loop:

```
BEGIN
    result = 0
    FOR i = 1 TO 4
        FOR j = 1 TO i
            result = result + j
    END FOR i
    PRINT result
END
```

A) 10 B) 15 C) 20 D) 25

Q2. What does this pseudocode calculate?

```
BEGIN
    n = 729
    count = 0
    WHILE n > 1
        n = n / 3
        count = count + 1
    END WHILE
    PRINT count
END
```

A) 6 B) 5 C) 4 D) 7

Q3. Analyse this pattern generation:

```
BEGIN
    n = 4
    FOR i = 1 TO n
        FOR j = 1 TO (n - i + 1)
            PRINT j
        END FOR j
        PRINT NEWLINE
    END FOR i
END
```

A) 8 B) 10 C) 12 D) 16

Q4. What will this pseudocode output?

```
BEGIN
    a = 7, b = 3
    FOR k = 1 TO 5
        temp = a % b
        a = b
        b = temp
        IF b == 0
            BREAK
        END IF
    END FOR
    PRINT a
END
```

A) 0 B) 1 C) 3 D) 7

Q5. Trace this complex loop:

```
BEGIN
    result = 1
    FOR i = 2 TO 6
        FOR j = 1 TO i
            IF j % 2 == 1
                result = result * j
            END IF
        END FOR j
    END FOR i
    PRINT result
END
```

A) 225 B) 675 C) 1125 D) 2025

Q6. What does this pseudocode compute?

```
BEGIN
    n = 64
    result = 0
    WHILE n > 0
        IF n % 2 == 1
            result = result + 1
        END IF
        n = n / 2
    END WHILE
    PRINT result
END
```

A) 1 B) 2 C) 6 D) 64

Q7. What will be printed?

```
BEGIN
    base = 2, exp = 8
    result = 1
    WHILE exp > 0
        IF exp % 2 == 1
            result = result * base
        END IF
        base = base * base
        exp = exp / 2
    END WHILE
    PRINT result
END
```

A) 16 B) 64 C) 128 D) 256

Q8. What does this pseudocode calculate?

```
BEGIN
    num = 28
    sum = 0
    FOR i = 1 TO num-1
        IF num % i == 0
            sum = sum + i
        END IF
    END FOR
    IF sum == num
        PRINT "PERFECT"
    ELSE
        PRINT "NOT PERFECT"
    END IF
END
```

A) PERFECT B) NOT PERFECT C) 28 D) ERROR

Q9. Analyze this complex calculation:

```
BEGIN
    x = 3, y = 4, z = 5
    result = 0
    FOR i = 1 TO 3
        FOR j = 1 TO i
            result = result + (x * i + y * j + z)
        END FOR j
    END FOR i
    PRINT result
END
```

A) 87 B) 96 C) 112 D) 114

Q10. Determine the sequence generated:

```
BEGIN
    a = 0, b = 1
    PRINT a, b
    FOR i = 1 TO 5
        c = a + b
        PRINT c
        a = b
        b = c
    END FOR
END
```

What is the 5th number printed after the initial two?

A) 5 B) 8 C) 13 D) 21

Q11. Analyze this number pattern:

```
BEGIN
    FOR i = 1 TO 4
        FOR j = 1 TO 4
            IF i == j OR i + j == 5
                PRINT "1"
            ELSE
                PRINT "0"
            END IF
        END FOR j
        PRINT NEWLINE
    END FOR i
END
```

What appears in position (2,3)?

A) 0 B) 1 C) 2 D) 3

Q12. Determine the pattern:

```
BEGIN
    FOR i = 1 TO 4
        spaces = 4 - i
        FOR j = 1 TO spaces
            PRINT " "
        END FOR j
        FOR k = 1 TO (2 * i - 1)
            PRINT "*"
        END FOR k
        PRINT NEWLINE
    END FOR i
END
```

How many stars in the last row?

A) 5 B) 6 C) 7 D) 8

13. What does this evaluate to?

```
BEGIN
    age = 17
    hasLicense = TRUE
    IF age >= 18 OR hasLicense
        IF age >= 16
            PRINT "Can Drive"
        ELSE
            PRINT "Too Young"
        END IF
    ELSE
        PRINT "Cannot Drive"
    END IF
END
```

A) Can Drive B) Too Young C) Cannot Drive D) ERROR

14. What does this evaluate to?

```
Let arr = [3, 1, 4, 1, 5, 9, 2]
sum = 0
For i = 0 to length(arr) - 1
    If arr[i] > arr[(i+1) mod length(arr)]
        sum = sum + arr[i]
Print sum
```

A) 14 B) 15 C) 16 D) 24

Q15. Determine the output:

```
BEGIN
    a = 3, b = 7
    a = a XOR b
    b = a XOR b
    a = a XOR b
    PRINT a, b
END
```

A) 3, 7 B) 7, 3 C) 4, 4 D) 0, 10