

Day - 12

Date _____
Page _____

(1) (1) $GOOD \rightarrow (G)7 + (O)15 + (O)15 + D(4) = 41 \times 4 = 164$
 (2) $BAD \rightarrow (B)2 + (A)1 + (D)4 = 7 \times 4 = 28$
 (3) $UCLY \rightarrow (U)21 + (C)7 + (L)12 + Y(25) = 65 \times 4 = 260$
 (4) $JUMP \rightarrow (J)10 + (U)21 + (M)13 + P(16) = 60 \times 4 = 240$

(2) total no. of ways to arrange 10 people around a circular table - $9!$
 if 5 boys are sitting together then treat them as a single entity, resulting in 6 entities.

\rightarrow no. of ways that (5 girl and 1 group) is

6 entities arranged in a circular table is $5!$
 within this, the boys can be arranged among themselves in $5!$ ways.

So total no. of favourable arrangements = $5! \times 5!$

probability of this event = $\frac{5! \times 5!}{9!} = \frac{5}{126}$

Ans $\rightarrow B$

(3) \rightarrow Most logical sequence $\rightarrow (C) \rightarrow BDAC$

(4) \rightarrow output $\rightarrow A(B) \% \%$

(5) \rightarrow Algorithm of Bubble sort:

(5) BubbleSort(A, n)

{ for $k \leftarrow 1$ to $n-1$

{ for $i \leftarrow 0$ to $n-k-1$

{ if $(A[i] > A[i+1])$

{ swap $(A[i], A[i+1])$

}

}

2023/12/24 10:28

Ex- of bubble sort:-

64, 34, 25, 12, 22, 11, 90 (sort)

1st pass:- 64, 34, 25, 12, 22, 11, 90

 └─ swap ─┘
34, 64, 25, 12, 22, 11, 90

 └─ swap ─┘
34, ~~25~~, 64, 12, 22, 11, 90

 └─ swap ─┘
 └─ swap ─┘
 └─ swap ─┘
 └─ no swap ─┘

so - 22, 25, 12, 22, 11, 64, 90

2nd pass:- 34, 25, 12, 22, 11, 64, 90

 └─ swap ─┘
25, 34, 12, 22, 11, 64, 90

 └─ swap ─┘
25, 12, 34, 22, 11, 64, 90

 └─ swap ─┘
25, 12, 22, 34, 11, 64, 90

 └─ swap ─┘
25, 12, 22, 11, 34, 64, 90

so - 25, 12, 22, 11, 34, 64, 90

3rd pass:- 25, 12, 22, 11, 34, 64, 90

 └─ swap ─┘
12, 25, 22, 11, 34, 64, 90

 └─ swap ─┘
12, 22, 25, 11, 34, 64, 90

 └─ swap ─┘
12, 22, 11, 25, 34, 64, 90

so - 12, 22, 11, 25, 34, 64, 90

4th pass:- 12, 22, 11, 25, 34, 64, 90

 └─ no swap ─┘

 └─ swap ─┘
12, 11, 22, 25, 34, 64, 90

so 12, 11, 22, 25, 34, 64, 90

5th pass:- 12, 11, 22, 25, 34, 64, 90

 └─ swap ─┘
11, 12, 22, 25, 34, 64, 90

6th pass:- 11, 12, 22, 25, 34, 64, 90

no swap