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Question No: 31 (Marks: 1) - Please choose one

If two sets are disjoint, then $P \cap Q$ is

- \emptyset
- P
- Q
- $P \cup Q$

Question No: 32 (Marks: 1) - Please choose one

Every connected tree

- does not have spanning tree
- may or may not have spanning tree
- **has a spanning tree (Page 329)**

Question No: 33 (Marks: 1) - Please choose one

When $P(k)$ and $P(k+1)$ are true for any positive integer k , then $P(n)$ is not true for all +ve Integers.

- **True (Lecture 23)**
- False

Question No: 34 (Marks: 1) - Please choose one

When $3k$ is even, then $3k+3k+3k$ is an odd.

- True
- **False**

Question No: 35 (Marks: 1) - Please choose one

$5n - 1$ is divisible by 4 for all positive integer values of n .

- **True**
- False

Question No: 36 (Marks: 1) - Please choose one

Quotient –Remainder Theorem states that for any positive integer d , there exist unique integer q and r such that $n = d \cdot q + r$ and _____.

- **$0 \leq r < d$ (Page 201)**
- $0 < r < d$
- $0 \leq d < r$
- None of these

Question No: 37 (Marks: 1) - Please choose one

The given graph is