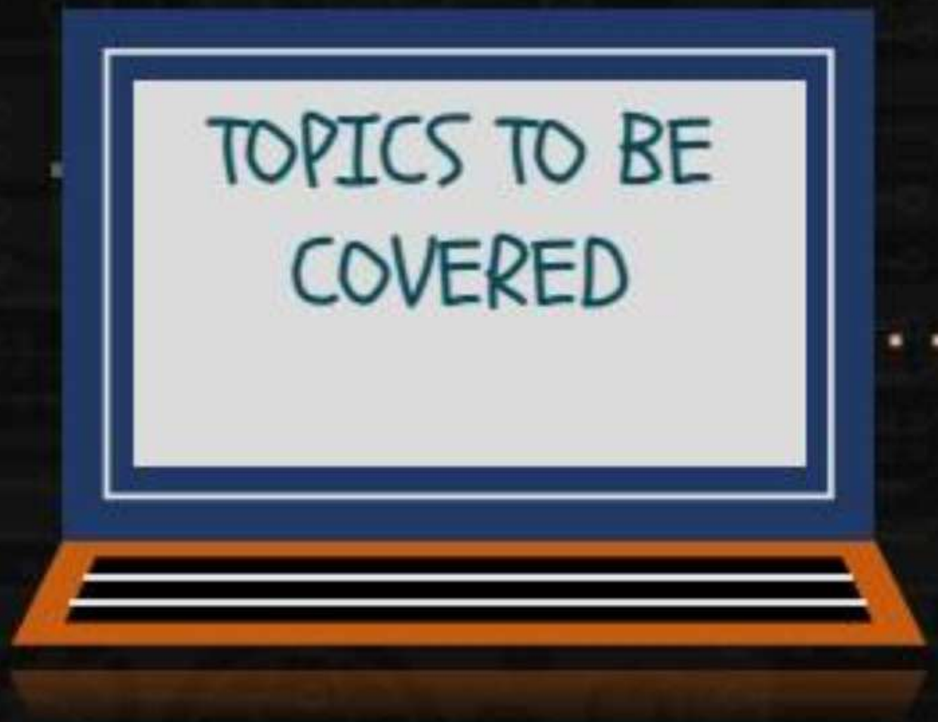
CS & IT ENGINEERING

Discrete Mathematics

Set Theory

DPP 09 Discussion

SATISH YADAV



01 Question

02 Discussion

Q.1

The poset [D12; |] is

[MCQ]

A. a lattice.

B. a join semi lattice but not a meet semi lattice.

C. a meet semi lattice but not a join semi lattice.

D. not a semi lattice.

Q.2 If n is a positive integer, then $[D_n; |]$ is a _____. [MCQ]

(i) Poset ✓ (ii) lattice ✓

(iii) Boolean algebra $(D_{12}, |)$

Which of the following is true?

A. (i) and (ii) are ture ✓

B. (ii) and (iii) are ture

C. (i) and (iii) are ture

D. (i), (ii) and (iii) are true

Q.3 Which of the following statements is false, for the Lattice $[P(A); \subseteq]$

[MCQ]

A. The upper bound of $[P(A); \subseteq]$ is A. ✓

B. The lower bound of $[P(A); \subseteq]$ is $\varnothing$. ✓

C. The upper bound of $[N; \leq]$ does not exist, where N is set of all positive integers. (T)

D. The lower bound of $[N; \leq]$ is 0 (false) ✓

Q.4 Which of the following is not true

[MCQ]

False.

A. [P(A); ⊆] is a distributive lattice. (T)

glb → ∩ lub → ∪

B. Every Boolean algebra is a distributive lattice. (T)

C. If L is a bounded distributive lattice, the complements are unique, if they exist. (T)

D. Every distributive lattice is a Complemented lattice (false)

(Z12, ·)

Q.5 Which of the following posets is not a Lattice.

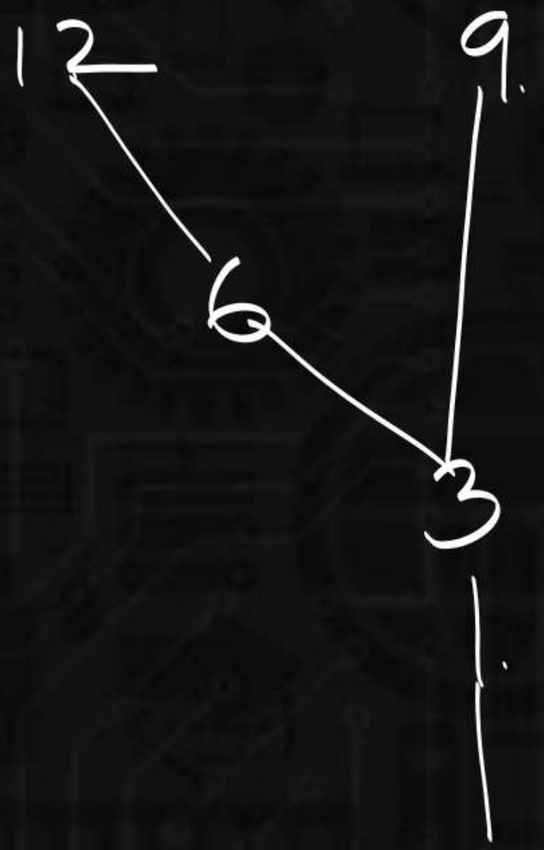
[MCQ]

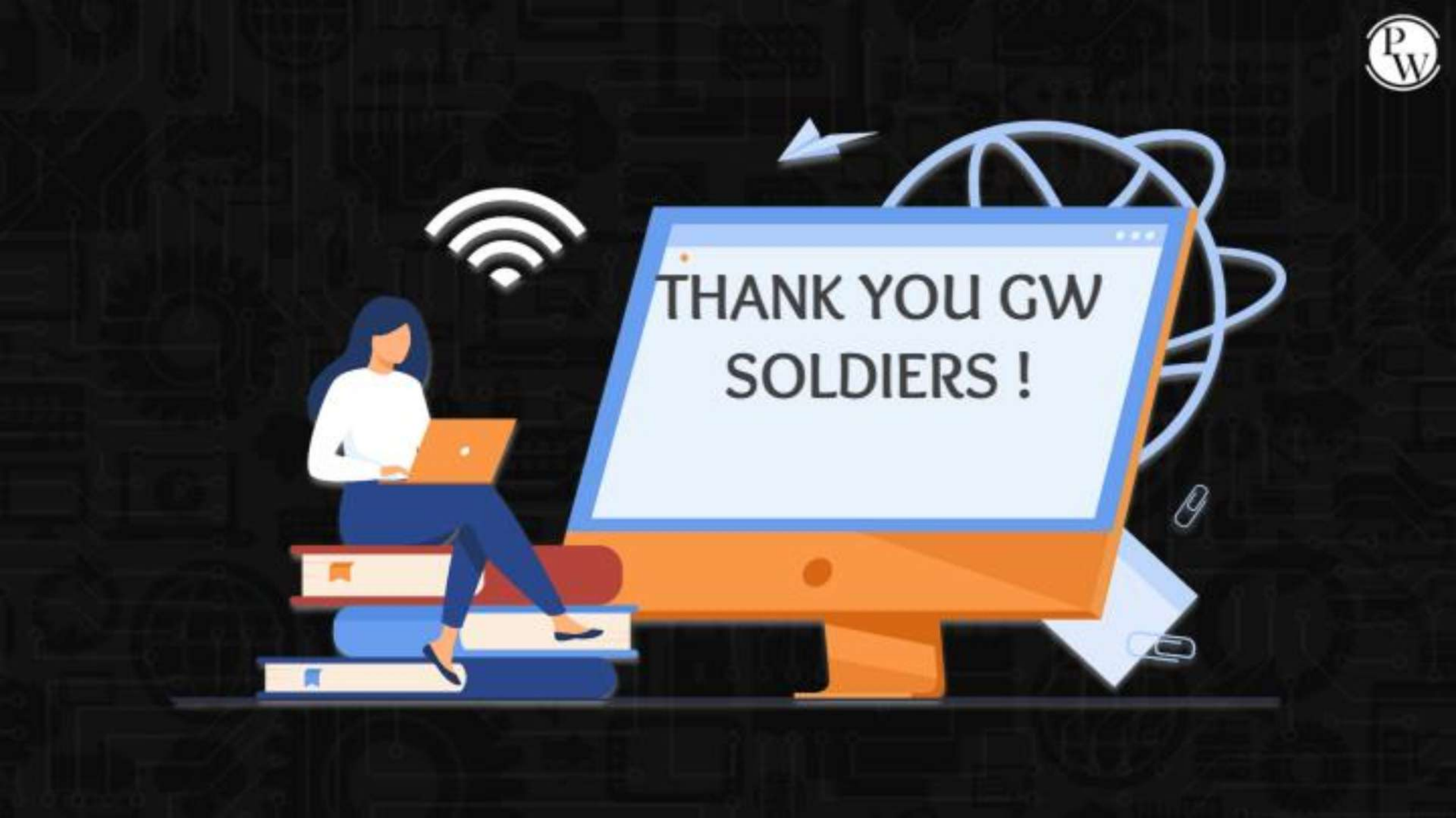
A. [{1, 3, 6, 9, 12}; |] (True)

B. [{1, 5, 25, 125}; |]

C. [{1, 2, 4, 8, 16}; |]

D. [Z; ≥]




THANK YOU GW
SOLDIERS !