# B.Tech.-II (CSE)

*Required

## Untitled section

Attempt all questions

Radius of a graph, denoted by rad(G) is defined by.... * 1 point

- [x] max {e(v): v belongs to V }
- [ ] max { d(u,v): u and v belongs to G, u does not equal to v }
- [ ] min { d(u,v): u and v belongs toG, u does not equal to v }
- [ ] min { e(v): v belongs to V}

In a complete graph with n vertices there is a total of_____ * 1 point

- [ ] n(n - 1) edges.
- [ ] (1/2)n(n + 1) edges.
- [ ] None of the above
- [x] (1/2)n(n - 1) edges.
- [ ] n(n + 1) edges.

The 'Subset' relation on a set of sets is * 1 point

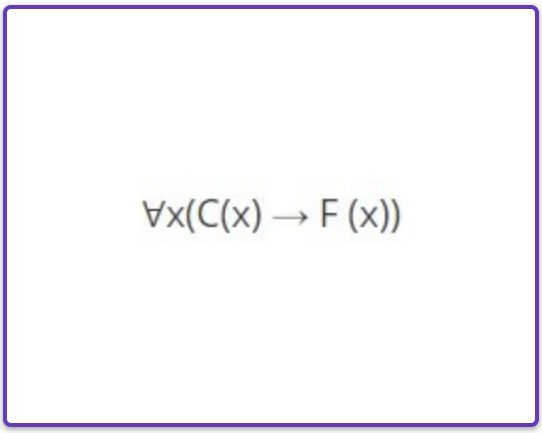
- ( ) An equivalence relation
- (•) A partial ordering
- ( ) Transitive and anti symmetric only
- ( ) Transitive and symmetric only

The number of different permutations of the word BANANA is * 1 point

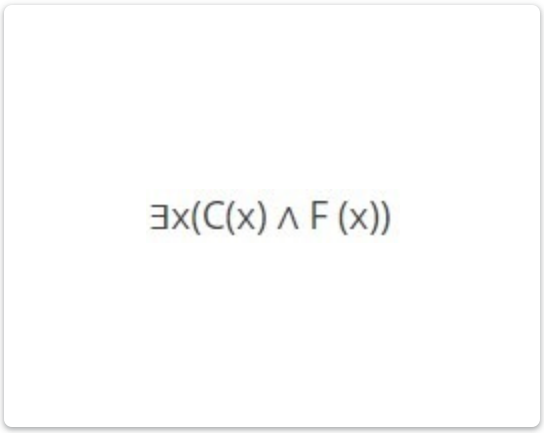
- ○ 720
- ◉ 60
- ○ 360
- ○ 120

* 1 point

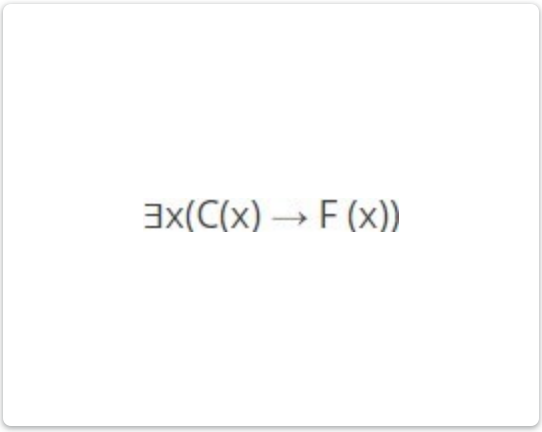
The statement," Every comedian is funny" where C(x) is "x is a comedian" and F (x) is "x is funny" and the domain consists of all people.



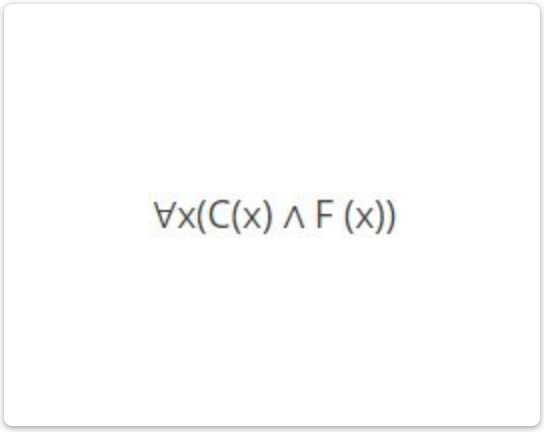

◉ Option 4




○ Option 1




○ Option 3

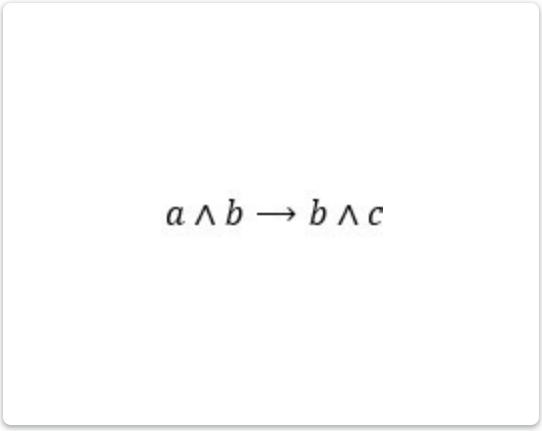



○ Option 2

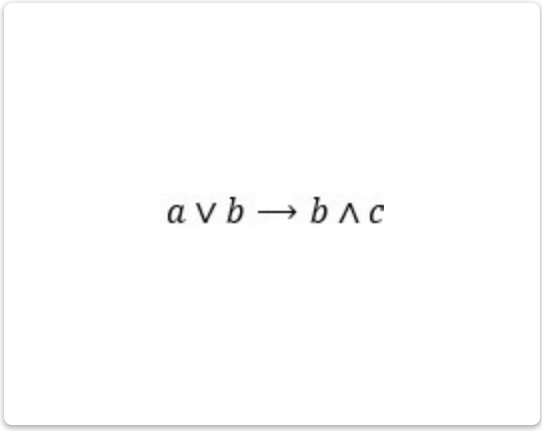
If for some positive integer k, degree of vertex deg(v)=k for every vertex v of the graph G, then Gis called... * 1 point

- [x] k-regular graph
- [ ] k graph
- [ ] All of above
- [ ] Empty graph

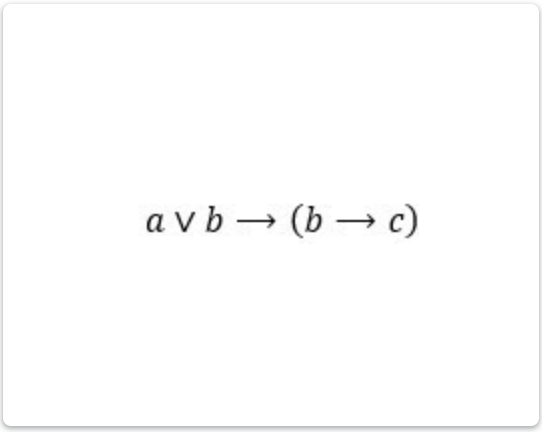
Which of the followings is/are a tautology? * 1 point



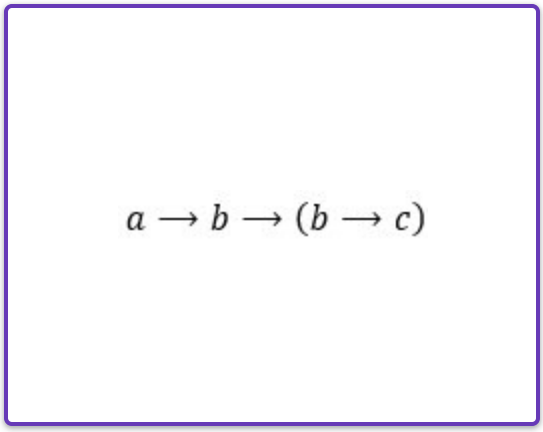

- (○) Option 2




- ( ) Option 1




- ( ) Option 3




- (●) Option 4

A graph has an Euler circuit if_____ *

1 point

- [ ] it is connected and has an even number of edges.
- [ ] None of the above
- [x] every vertex has even degree.
- [x] it is connected and every vertex has even degree.
- [ ] it is connected and has an even number of vertices.

*

1 point

The binary relation $S = \emptyset$ (empty set) on a set $A = \{1,2,3\}$ is

- ( ) Neither reflexive nor symmetric
- ( ) Symmetric and reflexive
- (•) Transitive and symmetric
- ( ) Transitive and reflexive

A graph with 4 vertieces and degree sequence 1, 1, 3, 3 is____ *

1 point

- [ ] circuitless
- [x] disconnected graph.
- [ ] not possible to draw.
- [x] connected graph
- [ ] simple graph

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