Class –T.Y.B.Sc
Semester-VI
Paper-IV –Option C
GRAPH THEORY AND COMBINATORICS

Sample Questions

1	Every k-chromatic graph has at least k-vertices of degree at least a. k+1 b. k c. k-1 d. none of above
2	What will be the chromatic number for a tree having more than 1 vertex? a)0 b)1 c)2 d) none of the above
3	Every graph of order 6 with chromatic number 3 has at most a. 12 edges b. 10 edges c. 18 edges d. 14 edges
4	Every tree with n≥2 vertices are a. 3-chromatic b. 2-chromatic c. 1-chromatic d. 4-chromatic
5	A complement of a simple planar graph with 11 vertices is a. Planar graph b. non-planar graph c. Maximal planar d. none of these
6	If G is graph of order P and $\partial(G) \geq p-2$ $then$ a. k(G) = $\partial(G)$ b. k(G) > $\partial(G)$ c. k(G) < $\partial(G)$ d. k(G) ≠ $\partial(G)$
7	Rook polynomial for 1xn, with n=1 chess board is a. 1+nx b. 1+x c. 1+3x d. none of these
8	A flow network G = (V, E) is a directed graph where each edge (u, v) ∈ E has a capacity a. C (u, v) < 0 b. C (u, v)≠0 c. C (u, v) ≥ 0 d. none of these
9	Chromatic number of odd cycles is a. 1 b. 3 c. 2 d. none of these
10	Every critical graph is a. disconnected b. cyclic

	c. connected d. none of these
11	Edge chromatic number of K2 is a. 0 b. 2 c. 1, d. 4
12	If edge chromatic number of graph G is equal to maximum degree of G then G is a. Tree b. Bipartite graph, c. Cycle d. None of these
13	If G is a planar graph of order $n\geq 3$, size m then , a. $m \geq 3n-6$ b. $m\leq 3n-6$, c. $m = 3n$ d. none of these
14	Kn is planar if a. $n > 4$ b. $n\leq 4$, c. $n=5$ d. none of these
15	Any planar graph is a spanning subgraph of a a. maximal planar graph b. connected graph c. planar embedding graph d. none of these
16	Every k-chromatic graph has at least k-vertices of degree at least a. k+1 b. k c. k-1 d. none of above
17	Every graph of order 6 with chromatic number 3 has at most a. 12 edges b. 10 edges c. 18 edges d. 14 edges
18	Every tree with $n\geq 2$ vertices are a. 3-chromatic b. 2-chromatic c. 1-chromatic d. 4-chromatic
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